BUREAU OF RECLAMATION DENVER LIBRARY
92085356

Biota of Lake Mead

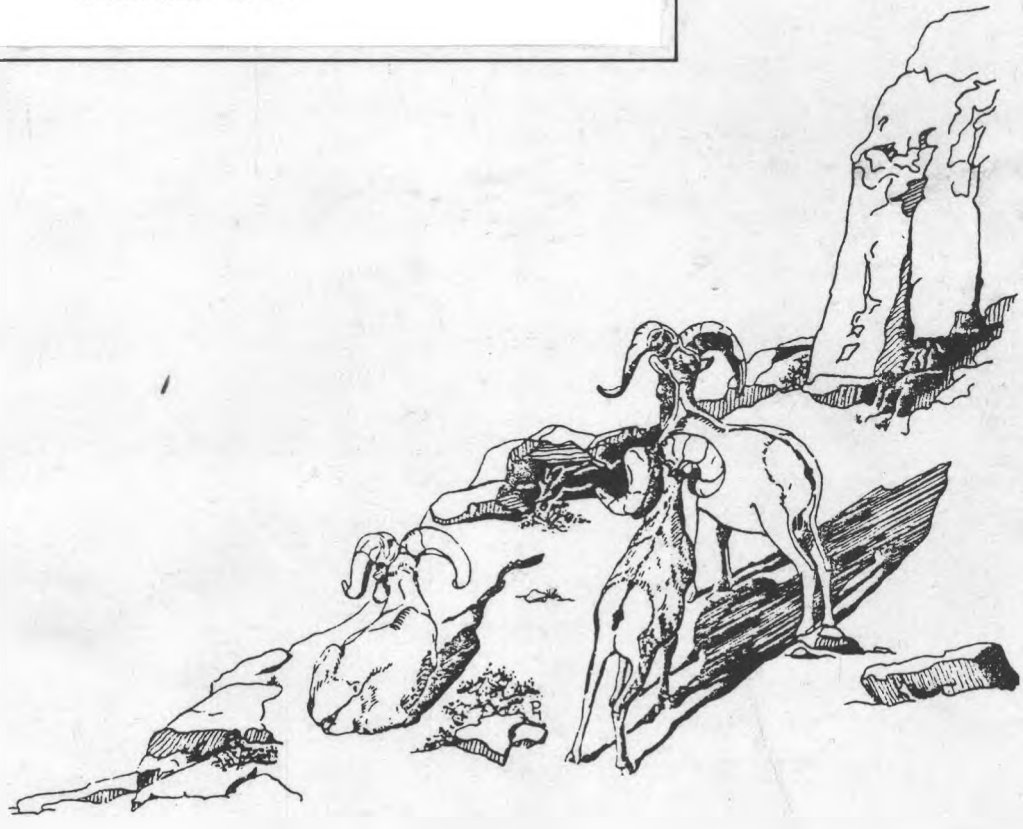
National Recreation Area

NEVADA - ARIZONA

AMPHIBIANS, REPTILES AND MAMMALS
OF THE LAKE MEAD NATIONAL RECREATION AREA

LAME Technical Report No. 2

December 1978



QH
305.2
.N4
no.2
1978

Lake Mead Report Series

UNITED STATES DEPARTMENT OF THE INTERIOR - NATIONAL PARK SERVICE

BIOTA OF THE LAKE MEAD NATIONAL RECREATION AREA
Nevada/Arizona

The first major survey of the biological resources of the Lake Mead National Recreation Area was initiated in 1974 as a joint endeavor between the National Park Service and the University of Nevada/Las Vegas under the auspices of the Cooperative National Park Resources Studies Unit, University of Nevada/Las Vegas. This research program consists of a series of interdisciplinary investigations that deal with the plants and animal life of the Lake Mead National Recreation Area and closely adjoining lands.

Final reports that result from these studies will be reproduced in a LAKE MEAD PROJECT TECHNICAL REPORT SERIES that will be supplemented by technical papers published as Project Contributions in scientific journals.

Cover Drawing by Pat Hansen

602/138777

QH305.2 .N4 no. 2 1978

COOPERATIVE NATIONAL PARK RESOURCES STUDIES UNIT
UNIVERSITY OF NEVADA, LAS VEGAS
Department of Biological Sciences
Las Vegas, Nevada 89154

AMPHIBIANS, REPTILES AND MAMMALS OF THE LAKE MEAD NATIONAL RECREATION AREA

LAME Technical Report No. 2

December 1978

DATE DUE

by

Jeffrey Schwartz
George T. Austin

and

Charles L. Douglas

Wesley E. Niles and Charles L. Douglas
Project Directors

NATIONAL PARK SERVICE/UNIVERSITY OF NEVADA, LAS VEGAS

Charles L. Douglas, Unit Leader
Senior Research Scientist

Contract Nos. CX 8000-4-0031/CX 8000-6-0034

Contribution Number CPSU/UNLV 008/11

SURPLUS
RECLAMATION LIBRARY
DO NOT RETURN
APR 13 2012
Bureau of Reclamation
Denver, CO

92085356

TABLE OF CONTENTS

Map of the Lake Mead National Recreation Area. i
Abstract 1
Introduction
Amphibians and Reptiles 2
Mammals 3

AMPHIBIANS AND REPTILES
Families
Ambystomidae 6
Pelobatidae. 6
Bufonidae. 6
Hylidae. 8
Ranidae. 9
Chelydridae. 10
Testudinidae 10
Trionychidae 11
Gekkonidae 11
Iguanidae. 12
Xantusidae 19
Teidae 19
Helodermatidae 20
Leptotyphlopidae 21
Colubridae 21
Crotalidae 27
Literature Cited. 29
Index 32

MAMMALS
Families
Soricidae. 34
Phyllostomatidae 34
Vespertilionidae 34
Molossidae 39
Leporidae. 40

(MAMMALS)

(Families)

Sciuridae. 42

Geomyidae. 45

Heteromyidae 46

Castoridae 51

Cricetidae 51

Muridae. 58

Erethizontidae 58

Caniidae 59

Procyonidae. 61

Mustelidae 62

Felidae. 63

Equidae. 64

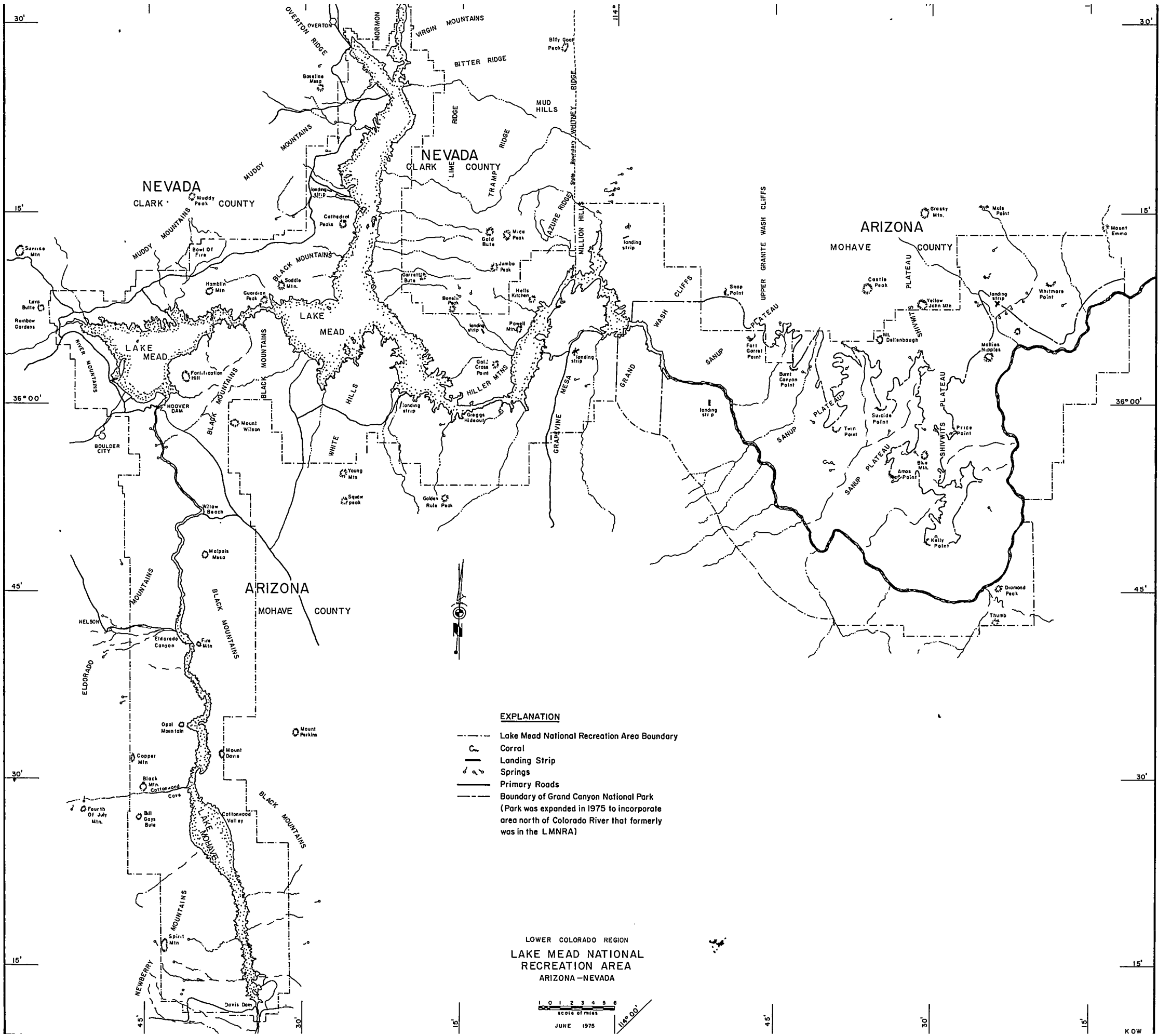
Cervidae 65

Antilocapridae 66

Bovidae. 66

Literature Cited 68

Index. 70


NEVADA
CLARK COUNTY
ARIZONA
MOHAVE COUNTY
LAKE MEAD
LAKE MOHAVE
OVERTON
OVERTON RIDGE
MORMON
VIRGIN MOUNTAINS
BITTER RIDGE
MUD HILLS
MUDDY MOUNTAINS
BLACK MOUNTAINS
LIME RIDGE
TRAMP RIDGE
AZURE RIDGE
MILLION HILLS
HILLER MTNS
GRAPEVINE MESA
GRAND WASH CLIFFS
UPPER GRANITE WASH CLIFFS
SANUP PLATEAU
SHIVWITS PLATEAU
RIVER MOUNTAINS
HOOVER DAM
BOULDER CITY
NELSON
ELDORADO
NEWBERRY
Davis Dam
Willow Beach
Malpais Mesa
Mount Wilson
Fortification Hill
Muddy Peak
Sunrise Mtn
Lava Butte
Rainbow Gardens
Bowl Of Fire
Hamblin Mtn
Guardian Peak
Saddle Mtn
Cathedral Peaks
Gold Butte
Mica Peak
Jumbo Peak
Hells Kitchen
Gypsum Mtn
Gal Cross Point
Gregg's Hideout
Golden Rule Peak
Young Mtn
Squaw Peak
Billy Goat Peak
Baseline Mesa
Snap Point
Fort Garrett Point
Burnt Canyon Point
Suicide Point
Twin Point
Amos Point
Blue Mtn
Kelly Point
Price Point
Mollies Nipples
Mt. Dellenbaugh
Yellow John Mtn
Castle Peak
Grassy Mtn.
Mule Point
Whitmore Point
Mount Emma
Diamond Peak
Thumb
Opal Mountain
Copper Mtn
Black Mtn.
Cottonwood Cove
Fourth Of July Mtn.
Bill Gays Butte
Cottonwood Valley
Mount Davis
Mount Perkins
Spirit Mtn
Eldorado Canyon
Fire Mtn
landing strip
EXPLANATION
Lake Mead National Recreation Area Boundary
Corral
Landing Strip
Springs
Primary Roads
Boundary of Grand Canyon National Park (Park was expanded in 1975 to incorporate area north of Colorado River that formerly was in the LMNRA)
LOWER COLORADO REGION
LAKE MEAD NATIONAL RECREATION AREA
ARIZONA—NEVADA
scale of miles
JUNE 1975
114° 00'
36° 00'
KOW

ABSTRACT

A biotic survey of the Lake Mead National Recreation Area was initiated on June 28, 1974, and continued through June 30, 1978. This study was conducted under the auspices of the Cooperative National Park Resources Studies Unit at the University of Nevada, Las Vegas. The objectives of this comprehensive survey were as follows:

1. To prepare a bibliography of prior studies in the region that includes records and literature citations of the flora and fauna.

2. To determine present distributional patterns of plants and animals in the Lake Mead area.

3. To identify and analyze the composition of communities in the Lake Mead area.

4. To identify and evaluate the status of rare, endangered and threatened species of plants and animals (except fishes) and their habitat requirements.

5. To evaluate the impact of man on the flora and fauna.

This report is the third in a series concerning the biota of the Lake Mead National Recreation Area (LMNRA). The first report was an annotated checklist and bibliography in which all literature citations relating to fauna and flora of Lake Mead were compiled. Following this was a report on the avifauna of the LMNRA. Other reports will include the flora, endangered species, and the impacts of man on the biota.

The present report contains species accounts of terrestrial vertebrates. Twenty families of mammals are represented by 70 species. Three of these are exotics--the house mouse, the feral burro, and the feral goat. Five families of amphibians are comprised of nine frogs and one salamander. Reptiles are numerous; forty-one species are representatives of 11 families. Two turtles and the bullfrog have been introduced into the waterways of the area, but are not part of the endemic fauna.

AMPHIBIANS AND REPTILES

Amphibians and reptiles of the LMNRA are not well known. The first extensive surveys of the herpetofauna of northwestern Arizona and southern Utah were conducted during the early explorations of the region, the results of which were reported by Yarrow (1875), Yarrow and Henshaw (1878) and Stejneger (1893). Later work was conducted by Van Denburgh and Slevin (1921), Klauber (1932), Cowles and Bogert (1936), La Rivers (1942), Bradley and Deacon (1966a) and others. A checklist for the LMNRA was compiled by Grater (1939), for the state of Nevada by Linsdale (1940) and for Arizona by Lowe (1964). A summary of herpetological studies in the western United States was published by Banta and Tanner (1964).

The majority of amphibians and reptiles are found at low elevations in the Recreation Area. Amphibians are restricted in their distribution and most remain within a short distance of water. Some of the frogs and toads remain in moist microenvironments that may have ephemeral pools or streams of water.

Four species of lizards and one snake are found in the Recreation Area only on the Shivwits Plateau. These taxa are the following:

Sceloporus occidentalis - western fence lizard

Sceloporus graciosus - sagebrush lizard

Phrynosoma douglassi - short-horned lizard

Cnemidophorus velox - plateau whiptail

Masticophis taeniatus - desert striped whipsnake

The plateau whiptail reaches the southwestern limits of its range on the Shivwit's Plateau. The sagebrush lizard is close to its southern limits in the LMNRA; it also occurs in the remainder of Nevada, and in the northernmost parts of Arizona.

The eastern and western fence lizards may intergrade in the Lake Mead area. Range overlap between these two species reportedly occurs at St. George, Utah and on Horseshoe Island in Lake Mead (Stebbins 1954). The location reported on Hoseshoe Island by Shannon (1950) is thought to be in error (Kay and Bradley 1968). We were not able to verify the presence of the eastern fence lizard in the LMNRA, but there is a high probability that it occurs in the area, or close nearby.

The side-blotched lizard (*Uta stansburiana*) and the gopher snake (*Pituophis melanoleucus*) are the most ubiquitous species of reptiles in the Lake Mead area. They are found at all elevations within the Recreation Area.

MAMMALS

Mammalian distributions in the Lake Mead area are reported upon in several regional works, most notable of which are Cockrum (1960), Hoffmeister and Nader (1963) for Arizona, and Burt (1934) and Hall (1946) for Nevada. Several other reports consider distributional records of one or more species (Cockrum and Musgrove 1964; Ryser 1964; Bradley and Hansen 1965; Bradley 1966; Bradley and Moor 1968). A checklist of the mammals of LMNRA was compiled by Baldwin (1944) and revised by Bentley (1957). Bats comprise 17 of the 70 species (24%) of the area. Of the remaining taxa, the majority are forms that are adapted to living at the lower elevations. Twenty-six species, or 37%, of the mammalian fauna, are found mostly at the lower elevations:

Notiosorex crawfordi - desert shrew

Sylvilagus audubonii - desert cottontail

Ammospermophilus harrisii - Harris' antelope squirrel

Ammospermophilus leucurus - white-tailed antelope squirrel

Spermophilus tereticaudus - round-tailed ground squirrel

Perognathus longimembris - little pocket mouse

Perognathus amplus - Arizona pocket mouse

Perognathus formosus - long-tailed pocket mouse

Perognathus penicillatus - desert pocket mouse

Perognathus intermedius - rock pocket mouse

Perognathus spinatus - spiny pocket mouse

Dipodomys ordii - Ord's kangaroo rat

Dipodomys merriami - Merriam's kangaroo rat

Dipodomys deserti - desert kangaroo rat

Castor canadensis - beaver

Peromyscus eremicus - cactus mouse

Onychomys torridus - southern grasshopper mouse

Sigmodon hispidus - hispid cotton rat

Neotoma albigula - white-throated woodrat

Ondatra zibethicus - muskrat

Mus musculus - house mouse

Vulpes macrotis - kit fox

Bassariscus astutus - ringtail

Procyon lotor - raccoon

Lutra canadensis - river otter

Equus asinus - feral burro

Of these, the desert shrew, muskrat, beaver and river otter rely on aquatic areas and the adjacent riparian vegetation. The beaver is far more abundant than the other three species, which are rarely found.

Nine species (13%) are limited in their distribution to the higher elevations of the Shivwit's Plateau. These species are as follows:

Sylvilagus nuttallii - Nuttall's cottontail

Eutamias dorsalis - cliff chipmunk

Eutamias minimus - least chipmunk

Perognathus parvus - Great Basin pocket mouse

Dipodomys microps - chisel-toothed kangaroo rat

Peromyscus truei - pinyon mouse

Onychomys leucogaster - northern grasshopper mouse

Erethizon dorsatum - porcupine

Felis concolor - mountain lion

Sixteen species are more widely distributed and are found at both high and low elevations. This does not imply that each species is equally abundant at both high and low elevations, for this is not the case. Some species, such as the coyote, are relatively ubiquitous. Others, such as the deer mouse and the brush mouse are more abundant at the higher elevations where more suitable habitat is available. Conversely, the striped skunk and the desert bighorn sheep tend to be more abundant at lower elevations. These 16 species are as follows:

Lepus californicus - black-tailed jackrabbit

Spermophilus variegatus - rock squirrel

Thomomys bottae - Botta's pocket gopher

Reithrodontomys megalotis - western harvest mouse

Peromyscus crinitus - canyon mouse

Peromyscus maniculatus - deer mouse

Peromyscus boylii - brush mouse

Neotoma lepida - desert wood rat

Canis latrans - coyote

Urocyon cinereoargenteus - gray fox

Taxidea taxus - badger

Mephitis mephitis - striped skunk

Lynx rufus - bobcat

Odocoileus hemionus - mule deer

Ovis canadensis - mountain sheep

Three species are included provisionally. At the present time, they should be considered as hypothetical inhabitants or former inhabitants of the area. These three are the pronghorn antelope, least chipmunk and domestic goat. None is represented by verified reports, nor by specimens. The antelope presently does not live within the Lake Mead National Recreation Area. Chipmunks are difficult to identify even when museum specimens are available for comparison. It is possible that the reported goat may have escaped from domestication. It also is possible that this represented a sighting of a female desert bighorn sheep that was reported as a goat. Many persons mistake sheep for goats, and such misidentifications occasionally are reported to the Visitor's Center personnel. Conversely, one of us (CLD) has seen several feral goats near the Colorado River in Grand Canyon National Park. Such livestock undoubtedly escaped from the nearby Indian Reservation.

AMPHIBIANS AND REPTILES

OF THE

LAKE MEAD NATIONAL RECREATION AREA

AMBYSTOMIDAE

Ambystoma tigrinum (tiger salamander)

The only records for this species are from Las Vegas Wash and Blue Point Spring, but it may be expected anywhere around the lakes. It is introduced as escapees from bait buckets.

SPECIMENS EXAMINED: Blue Point Spring (UNLV A398, A399).

ADDITIONAL RECORDS: Las Vegas Wash* (Bradley and Niles 1973); Rogers Spring (Baker ms.)

OBSERVATIONS: None.

PELOBATIDAE

Scaphiopus hammondi (western spadefoot)

This species has not been recorded in LMNRA but it is to be expected in the vicinity of temporary rain pools following rains.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Valley of Fire (LaRivers 1942).

OBSERVATIONS: None.

BUFONIDAE

Bufo cognatus (great plains toad)

This toad is rare but it probably occurs throughout LMNRA in the vicinity of springs and along the lake shores.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: 2 miles southeast of Overton, Colorado River opposite Fort Mohave (Linsdale 1940).

OBSERVATIONS: None.

Bufo microscaphus (southwestern toad)

This species probably occurs rarely throughout LMNRA adjacent to the lakes and around springs.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Las Vegas Wash*, Hoover Dam, Davis Dam, Willow Beach (Stebbins 1951); Hemenway Wash, Eldorado Canyon (Deming 1953); Virgin River* (Baker ms.).

OBSERVATIONS: None.

Bufo punctatus (desert toad)

The desert toad is the most abundant toad in LMNRA. It may be found throughout in the vicinity of water but appears to be most common in the deeper canyons, especially below Hoover Dam.

SPECIMENS EXAMINED: Bridge Canyon on Colorado River above Lake Mead (UNLV A106), Emory Falls* (UNLV A365, A375-377; LMNRA #691, 697); Surprise Canyon (UNLV A231); 6.8 miles east of U.S. 95 on Nevada 77 (UNLV A149); Meriwhitica Canyon Spring (UNLV A378; LMNRA #709, 717); Willow Beach (UNLV A364; LMNRA #545).

ADDITIONAL RECORDS: mouth of Boulder Wash (Cowles and Bogert 1936); Boulder Dam, Rogers Spring (Linsdale 1940); Las Vegas Wash* (Bradley and Niles 1973); Willow Beach (Grater 1939); Moapa River* (Baker ms.); Diamond Creek, Whitmore Wash, Stantons Cave (MNA 1974).

OBSERVATIONS: mouth of Moapa River; Blue Point Spring; mouth of Las Vegas Wash; Hemenway Wash; Black Canyon below Hoover Dam; Nelsons Landing; Grapevine Canyon; Willow Beach; Katherine (Austin).

Bufo woodhousei (Woodhouse's toad)

This species is less abundant than Bufo punctatus but, like that species, is widespread in the vicinity of permanent water.

SPECIMENS EXAMINED: Rogers Spring (UNLV A447); 4 miles south of Cottonwood Cove (UNLV A236, A237); Davis Dam area (UNLV A140); 5.4 miles north of California-Nevada boundary near Colorado River (UNLV A137-139).

ADDITIONAL RECORDS: St. Thomas, lower Moapa and Virgin Valleys* (Stegneger 1893); Colorado River below Hoover Dam (Grater 1939); southeast of Overton, St. Thomas, Colorado River at

LIBRARY
APR 13 2012
Bureau of Reclamation
Denver, CO

25 miles above Hoover Dam, mouth of Virgin River, Moapa River Valley*, Kaolin Reservoir* (Linsdale 1940); Willow Beach (Stebbins 1951).

OBSERVATIONS: mouth of Moapa River; Rogers Spring; Willow Beach (Austin); Boulder Beach campground (LMNRA).

HYLIDAE

Hyla arenicolor (canyon tree frog)

This tree frog is occasional in canyons near water in the Arizona portion of LMNRA.

SPECIMENS EXAMINED: Surprise Canyon (UNLV A232); near Quartermaster Canyon (UNLV A367); Columbine Canyon* (UNLV A368-371); Laughing Canyon southwest of Parashaunt (UNLV A372, A373); Spencer Creek at Colorado River* (LMNRA #700; UNLV A374); Meriwhitica Canyon Spring (LMNRA #702).

ADDITIONAL RECORDS: None.

OBSERVATIONS: None.

Hyla regilla (pacific tree frog)

The pacific tree frog reaches its eastern limits of distribution in Nevada within LMNRA and has not been recorded on the Arizona side of the Colorado River. It is always found in the vicinity of water.

SPECIMENS EXAMINED: Las Vegas Wash at North Shore Road (UNLV A169); 0.6 mile north of California-Nevada boundary near Colorado River* (UNLV A196, A197).

ADDITIONAL RECORDS: Overton* (Stebbins 1951); Colorado River opposite Fort Mohave* (Banta 1961); Las Vegas Wash (Bradley and Niles 1973).

OBSERVATIONS: Las Vegas Wash below North Shore Road (Austin).

RANIDAE

Rana catesbeiana (bullfrog)

The bullfrog is abundant near permanent water. It is a non-native introduction and is maintaining its populations.

SPECIMENS EXAMINED: Moapa Valley Water District* (UNLV A438, A465); Rogers Spring (UNLV A440); Hemenway Wash (LMNRA #2592).

ADDITIONAL RECORDS: Lake Mead (Grater 1939); Kaolin Reservoir* (Linsdale 1940); Overton* (Stebbins 1951); Moapa and Virgin Rivers*, Boulder Wash (Deming 1953); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: mouth of Moapa River; Las Vegas Wash at Lake Mead; Lake Mohave at Eldorado Canyon (Austin); Rogers Spring (Schwartz).

Rana pipiens (leopard frog)

This frog is abundant throughout LMNRA in the vicinity of water. Much of the local population is probably descended from introduced animals. The native population referred to as Rana pipiens fisheri, if distinct, is probably extinct (e.g. Stebbins 1954) or genetically swamped by the introductions. Occasional unverified reports occur of its continued existence in Las Vegas Wash. We know of no definite records.

SPECIMENS EXAMINED: Kaolin Reservoir* (UNLV A366); Blue Point Spring (UNLV A34, A104, A105, A441, A471); Rogers Spring (UNLV A33, A35-37, A331, A440); Boulder City* (LMNRA #699); Warm Springs on Colorado River (UNLV A301, A302); cliff trail to Colorado River, 8 miles southeast of Boulder City (UNLV A32).

ADDITIONAL RECORDS: Boulder Wash; Colorado River; Moapa River* (Cowles and Bogert 1936); southeast of Overton; Rogers Spring; lower Virgin and Moapa River Valleys*; Las Vegas Creek; Colorado River, opposite Fort Mohave* (Linsdale 1940); Lake Mead area (Bradley and Deacon 1966a).

OBSERVATIONS: mouth of Moapa River; mouth of Las Vegas Wash; Willow Beach (Austin); Blue Point Spring, Corrall Spring (Schwartz); Rogers Spring (Austin, Schwartz).

CHELYDRIDAE

Kinosternon flavescens (yellow mud turtle)

Only one record for Nevada which may refer to this species or K. sororiense. The specimen is no longer available (Stebbins 1954). In any case, it was probably introduced.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Pyramid Canyon on west shore of Colorado River (LaRivers 1942).

OBSERVATIONS: None.

TESTUDINIDAE

Gopherus agassizi (desert tortoise)

This species is widespread but in small numbers throughout LMNRA below 4000 ft. and possibly occasionally higher.

SPECIMENS EXAMINED: 1 mile south of Searchlight* (UNLV R2033); 10 miles south of Railroad Pass on U.S. 95, 1.5 miles east on Nevada 60 in Eldorado Canyon* (UNLV R2035); 9 miles east of junction of Nevada 77 and U.S. 95 (UNLV R3707).

ADDITIONAL RECORDS: Lake Mead area (Vanderhorst 1941); Boulder Wash, 1 mile south of Boulder City* (Cowles and Bogert 1936); along Colorado River and Lake Mead (Grater 1939); Boulder City, bend of Colorado River, 10 miles south of Searchlight, 3 miles northwest of Fort Mohave* (Linsdale 1940); Shivwits Plateau (VanDenburgh 1922).

OBSERVATIONS: 2 miles east of Opal Mountain on road to Nevada Bay; 2 miles north of Copper Mountain; Cottonwood Cove; Lake Mead Lodge; Hemenway Wash; Callville Bay; North Shore Road; Willow Beach Campground (LMNRA); Valley of Fire*; Eldorado Canyon (Austin).

TRIONYCHIDAE

spiniferus

Trionyx ferox (spiny soft-shelled turtle)

This aquatic species is distributed throughout the Colorado River and its tributaries in LMNRA. It was introduced into the Colorado drainage in the early 1900s.

SPECIMENS EXAMINED: Lake Mead National Recreation Area (UNLV R456); Overton Wildlife Management Area* (UNLV R457, R209); Virgin River* (UNLV R596, R2102, R2103); 1 mile north of Eldorado Landing on Arizona side of the Colorado River (UNLV R296); Willow Beach (UNLV R2105); 1.5 miles north of the California-Nevada boundary on Colorado River* (UNLV R134).

ADDITIONAL RECORDS: north of Black Canyon (Cowles and Bogert 1936); Colorado River, entire Nevada portion (Linsdale 1940); Colorado River, Lakes Mead and Mohave (Deming 1953); Virgin and Moapa Rivers* (Bradley and Deacon 1966a); Pierce Ferry (Stebbins 1954).

OBSERVATIONS: mouth of Moapa River, Overton Beach (Austin); below Davis Dam Spillway, Callville Bay, 1 mile north of Eldorado Canyon (LMNRA).

GEKKONIDAE

Coleonyx variegatus (western banded gecko)

This widespread nocturnal species is distributed throughout LMNRA at lower elevations, especially in rocky areas. It is rarely seen during the day but is often encountered along roads at night.

SPECIMENS EXAMINED: intersection of Las Vegas Wash Road and North Shore Road (UNLV R4574, R4645); 9.1 miles west of North Shore Road on Callville Bay Road (UNLV R4651); Boulder City* (UNLV R4634); 5.2 miles west of Cottonwood Cove (UNLV R4587); 9.5 miles east of U.S. 95 on Cottonwood Cove Road (UNLV R4637); Cottonwood Cove (UNLV R4657); 9 miles east of U.S. 95 on Nevada 77 (UNLV R4669).

ADDITIONAL RECORDS: temporary island near Boulder City Boat Landing, mouth of Boulder Wash (Cowles and Bogert 1936); Hemenway Wash, Las Vegas Wash (Grater 1939); 20 miles above Boulder Dam along Colorado River, mouth of Virgin River, Colorado River near

La Verkin Springs Sept 79

Boulder Dam, Colorado River at 5 miles north of California border* (Linsdale 1940); Boulder City*, islands in Lake Mead (Klauber 1945); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: North Shore Road from Echo Bay to Callville Bay; Cottonwood Cove Road; Las Vegas Wash; Eldorado Canyon; Willow Beach; Katherine (Austin); Tyro Wash (Schwartz).

IGUANIDAE

Dipsosaurus dorsalis (desert crested lizard)

Widespread and locally abundant at lower elevations throughout LMNRA. It occurs most often in sandy and gravelly areas and tends to avoid rocky areas.

SPECIMENS EXAMINED: Lake Mead area (UNLV R391); Ringbolt Rapids (UNLV R754); Cottonwood Cove (UNLV R750, R2258-2262); Valley of Fire* (UNLV R747); Boulder City* (UNLV R156, R733); U.S. 95, 2 miles south of Railroad Pass* (UNLV R730); 0.8 mile east of Railroad Pass* (UNLV R2255-2257); 2 miles south of Davis Dam (UNLV R2253); 1 mile east of Sunrise Mountain* (UNLV R2263-2266, R3914); 5 miles south of Railroad Pass* (UNLV R3898, R3933); North Shore Road at Las Vegas Wash Road (UNLV R3903, R3920); Echo Bay (UNLV R3921); Pabco access road* (UNLV R3945-3950); 7 miles south of Echo Bay on North Shore Road (UNLV R3961); Hemenway Wash (LMNRA #623).

ADDITIONAL RECORDS: Callville, Great Bend of Colorado River, Virgin and Muddy Valleys* (Stejneger 1893); 1 mile north of Black Canyon in Arizona, north of Black Canyon in Nevada, Hemenway Wash, Las Vegas Wash* (Cowles and Bogert 1936); mouth of Virgin River, Valley of Fire*, Colorado River at 3 and 10 miles above Boulder Dam, Boulder City*, Searchlight*, Eldorado Mountains (Linsdale 1940); lower Moapa Valley (Deming 1953); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: 3 miles east of Overton*; Valley of Fire*; North Shore Road from Rogers Spring to Las Vegas Wash; Boulder City*; Eldorado Canyon; Cottonwood Cove; 10 miles east of Davis Dam; Grapevine Canyon; 1 mile east of Davis Dam; Willow Beach; Katherine; 2 miles south of Katherine (Austin); Tyro Wash (Schwartz).

Sauromalus obesus (chuckwalla)

This large lizard is rare but may be locally abundant in areas with large rocks throughout the low elevations of LMNRA. This species is often misidentified as the rarer Heloderma suspectum by the uninformed.

SPECIMENS EXAMINED: Sunrise Mountain* (UNLV R605, R670-676, R678-684, R688-694, R696, R697, R701, R702, R704, R705, R1228, R1229, R2274, R2275, R3735); Frenchman Mountain* (UNLV R3742); Valley of Fire* (UNLV R124, R687); 5 miles south of Hoover Dam (UNLV R685); Christmas Tree Pass (UNLV); Willow Beach (UNLV R276, R291); Chloride* (UNLV R396); Temple Bar (UNLV R520).

ADDITIONAL RECORDS: Hemenway Wash, Las Vegas Wash (Cowles and Bogert 1936); Valley of Fire, Searchlight*, Boulder Dam (Linsdale 1940); Boulder City, Boulder Wash, west bank of Colorado River, 2½ miles east of St. Thomas (Shaw 1945); Las Vegas Wash* (Bradley and Niles 1973); Nelson* (Baker ms.); Stantons Cave (MNA 1974).

OBSERVATIONS: Gold Butte; Valley of Fire*; Frenchman Mountain*; Grapevine Canyon (Austin); Callville Wash Road, Temple Bar (LMNRA); Christmas Tree Pass (Austin, Schwartz); Whitmore Point; Tyro Wash (Schwartz).

Callisaurus draconoides (zebra-tailed lizard)

Occurs abundantly throughout the lower elevations of LMNRA but is limited largely to sandy washes. In its preferred habitat it may be the most common lizard found.

SPECIMENS EXAMINED: Lake Mead (UNLV R61, R395, R441); Lake Mohave (UNLV R1076); Pakoon Springs Ranch* (UNLV R2383, R2389, R2391, R2392); Lake Mead Naval Base* (UNLV R648); Las Vegas Wash* (UNLV R2413, R2414); 10 miles east of Sunrise Mountain (UNLV R2424); Boulder City* (UNLV R1306, R1307, R1308, R1310); 3 miles southwest of Boulder City* (UNLV R180-182); 1 mile south of Boulder City* (UNLV R158); 2.5 miles north of Searchlight on Cottonwood Cove Road (UNLV R2374); Cottonwood Cove (UNLV R2419-2423); 0.7 mile east of U.S. 95 on Nevada 77* (UNLV R2354); mouth of Grapevine Canyon (UNLV R1309); 0.5 mile north of California-Nevada boundary along Colorado River* (UNLV R92, R2401).

ADDITIONAL RECORDS: Muddy River Valley* (VanDenburgh 1922); 2 and 5 miles southeast of Overton*, 8 miles south of St. Thomas, Boulder City*, Las Vegas Wash*, Colorado River at 3 and 12 miles above Boulder Dam, Callville, 5 and 12-20 miles north of Searchlight, Valley of Fire* (Linsdale 1940); west shore of Lake Mead (LaRivers 1942); Diamond Creek (MNA 1974).

OBSERVATIONS: Valley of Fire*; North Shore Road; Las Vegas Wash; 8 miles west of Davis Dam; Grapevine Canyon; 0.5 mile west of Davis Dam; Katherine; Willow Beach (Austin); Eldorado Canyon; Cottonwood Cove, Boulder City* (Austin, LMNRA).

Crotaphytus collaris (collared lizard)

This relatively large lizard is occasional but widespread throughout the lower elevations of LMNRA. It may be locally common especially in rocky areas.

SPECIMENS EXAMINED: Valley of Fire* (UNLV R1034); Sunrise Mountain* (UNLV R1033, R1050, R1052, R2286); 0.5 mile north of Lake Mead Marina on Las Vegas Wash Road (UNLV R3860); Hemenway Wash (LMNRA #639); Boulder City* (LMNRA #637); 1.5 miles south of Lake Mead (UNLV R3850); 0.6 mile south of Railroad Pass* (UNLV R1046); 1 mile south of Searchlight* (UNLV R3847); Temple Bar (UNLV R546, R547); White Hills* (UNLV R1036); Willow Beach (UNLV R519, R544, R545, R548, R549); 2 miles southeast of Willow Beach (UNLV R238).

ADDITIONAL RECORDS: St. Thomas (Cope 1883); mouth of Las Vegas Wash, mouth of Boulder Wash (Cowles and Bogert 1936); Boulder City*, Valley of Fire* (Linsdale 1940); junction of north and west arms of Lake Mead (LaRivers 1942).

OBSERVATIONS: North Shore Road near Echo Bay; Boulder Wash; Eldorado Canyon; Katherine (Austin); Cottonwood Cove (LMNRA); Corrall Spring; Southern Nevada Water Project Pump #2; Whitmore Point (Schwartz).

Crotaphytus wislizeni (leopard lizard)

Occasional but widespread throughout the lower elevations of LMNRA. It is more common and not as closely restricted to rocky areas as C. collaris.

SPECIMENS EXAMINED: 2 miles east of Sunrise Mountain* (UNLV R2302); Boulder City* (UNLV R1311, LMNRA #621); 4.7 and 5 miles south of Railroad Pass* (UNLV R3780, R3800); Searchlight* (UNLV R9, R10); 2.5 and 3 miles east of Searchlight on Cottonwood Cove Road (UNLV R3797, R3807); 9.4 miles south of Searchlight* (UNLV R3779); 0.5 and 1.5 miles east of U.S. 95 on Nevada 77* (UNLV R1053, R1061); Temple Bar (UNLV R551).

ADDITIONAL RECORDS: Boulder City sewage disposal plant* (Cowles and Bogert 1936); Cottonwood Spring, St. Thomas, Boulder City*, 5 miles southeast of Overton (Linsdale 1940); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: Valley of Fire*; Eldorado Canyon; 8 miles west of Davis Dam (Austin); Cottonwood Cove (Austin, LMNRA).

Sceloporus magister (desert spiny lizard)

This locally abundant species occurs throughout LMNRA at lower elevations especially in denser vegetation along major washes and the Colorado River. It is rarely encountered in the more barren areas and is often seen around buildings in developed areas.

SPECIMENS EXAMINED: Overton* (LMNRA #659); Boulder City* (LMNRA #661); 10 miles north of Searchlight* (UNLV R1733); Searchlight* (UNLV R71); 0.5 and 4.5 miles east of Searchlight on Cottonwood Cove Road (UNLV R1734, R2732, R2733); 1.5, 4.0, 6.0 and 9.0 miles east of U.S. 95 on Nevada 77* (UNLV R1700, R2702, R2707, R2715, R2718-2722); 0.6 mile north of California-Nevada boundary* (UNLV R1721, R1722, R1732); Ringbolt Canyon (UNLV R1702, R2154); Bullhead City* (UNLV R246).

ADDITIONAL RECORDS: Kaolin, Overton*, Colorado River at 25 miles above Boulder Dam (Linsdale 1940); Callville (Phelan and Brattstrom 1955); Las Vegas Wash* (Bradley and Niles 1973); Davis Dam area (Baker ms.); Diamond Creek; Stantons Cave, Great Bend of Colorado River (MNA 1974).

OBSERVATIONS: Rogers Spring (Austin, Schwartz); Hemenway Wash; Willow Beach; Eldorado Canyon; Grapevine Canyon; Katherine (Austin); St. Thomas Wash; Echo Bay (Schwartz).

Sceloporus occidentalis (western fence lizard)

This species is found occasionally at the higher elevations of LMNRA on the Shivwits Plateau where it is found in pinyon-juniper woodland and in open pine forest.

SPECIMENS EXAMINED: Twin Springs Point, Shivwits Plateau (LMNRA #657).

ADDITIONAL RECORDS: None.

OBSERVATIONS: Shivwits Plateau (Austin).

Sceloporus undulatus (eastern fence lizard)

Reported for an island in Lake Mead but this location was considered in error (see discussion in Kay and Bradley 1968).

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Horseshoe (Sentinal) Island (Shannon 1950).

OBSERVATIONS: None.

Sceloporus graciosus (sagebrush lizard)

Rare in sagebrush habitat on the Shivwits Plateau.

SPECIMENS EXAMINED: Fire Camp area, Shivwits Plateau (UNLV R1314-1323, LMNRA #685).

ADDITIONAL RECORDS: None.

OBSERVATIONS: Shivwits Plateau (Austin); Quartermaster Viewpoint (LMNRA); Whitmore Point (Schwartz).

Urosaurus graciosus (long-tailed brush lizard)

Occasional but more widespread and occurs in more open areas than U. ornata. It tends to be local. It often climbs onto the lower branches of bushes. The northernmost distribution of this species is in the Lake Mead area and records indicate that it probably occurs throughout LMNRA below about 3000 ft.

SPECIMENS EXAMINED: Boulder City* (UNLV R1263, R1267-1271, R1282-1289, R1326-1328, LMNRA #723); 4 miles south of Nelsons Landing (UNLV R4704); 0.7 mile east of U.S. 95 on Nevada 77* (UNLV R4682); 8.2 miles south of Hoover Dam on Arizona side of river (UNLV R1273).

ADDITIONAL RECORDS: Boulder City sewage disposal plant* (Cowles and Bogert 1936); vicinity of Virgin and Colorado Rivers, Boulder City*, 2 miles southeast of Overton, Callville, Colorado River at 25 miles above Boulder Dam, Valley of Fire* (Linsdale 1940); Las Vegas Wash (Bradley and Niles 1973).

OBSERVATIONS: Eldorado Canyon; Katherine (Austin); St. Thomas Wash (Schwartz).

Urosaurus ornatus (tree lizard)

This locally abundant species is truly arboreal but it is often found on rock faces and is most abundant in such situations in Black Canyon below Hoover Dam. Aside from this, it is usually found in stands of such trees as mesquite and the introduced tamerisk.

SPECIMENS EXAMINED: Bridge Canyon (UNLV R552, R657); Separation Rapids (UNLV R553).

ADDITIONAL RECORDS: Virgin River to Fort Mohave* (Yarrow 1882); Black Canyon, Eldorado Canyon (Linsdale 1940); Willow Beach (Grater 1939); Ringbolt Rapids (Baker ms.); Diamond Creek, Stantons Cave (MNA 1974).

OBSERVATIONS: Rogers Spring; Ringbolt Canyon; Black Canyon; Eldorado Canyon; Katherine.

Uta stansburiana (side-blotched lizard)

This is the most abundant lizard in LMNRA at elevations below 4500 ft. and may occur as high as 7000 ft. Records are for nearly all habitats except for areas of dense plant growth. This is the one lizard species that can be expected to be active in all months of the year.

SPECIMENS EXAMINED: Lake Mead area (UNLV R394); Valley of Fire* (UNLV R114-118); Sunrise Mountain* (UNLV R2493, R2494, R2500-2511, R2534, R5001, R5002); 10 miles east of Sunrise Mountain (UNLV R1823, R1825, R1852, R1868, R2468-2470); Las Vegas Wash* (UNLV R80); Railroad Pass* (UNLV R659-661); 0.5 mile south of Railroad Pass* (UNLV R2609); Eldorado Canyon (UNLV R2607, R2608, R2649-2651); 2 to 13 miles north of Searchlight* (UNLV R1796, R1820, R1821, R2447, R2481, R2486); 4.5 miles east of Searchlight* (UNLV R2487); 4.5 miles west of Cottonwood Cove (UNLV R1827, R1828, R1871); Cottonwood Cove (UNLV R2462); 2 miles south of Searchlight* (UNLV R1840); 0.7 and 4 miles east of U.S. 95 on Nevada 77* (UNLV R826, R1887, R2612); Bridge Canyon (UNLV R658); 5 miles east of Hoover Dam (UNLV R2564); Willow Beach (UNLV R82, R385).

ADDITIONAL RECORDS: Valley of Fire*, 2 and 5 miles southeast of Overton, St. Thomas, 14 miles northeast of Searchlight*, Colorado River at 25 miles above Boulder Dam, Boulder City* (Linsdale 1940); Las Vegas Wash* (Bradley and Niles 1973); 1 mile north of Black Canyon (Cowles and Bogert 1936); Whitmore Wash, Diamond Creek (MNA 1974).

OBSERVATIONS: Gold Butte*; Overton*; Valley of Fire*; Overton Beach; Echo Bay; entire North Shore Road between Echo Bay and Las Vegas Wash; Callville Bay; Las Vegas Wash; Boulder Beach; Boulder City*; Cottonwood Cove; Davis Dam; Temple Bar; between Temple Bar and Pierce Ferry; Pierce Ferry; Kingman Wash at Lake Mead; Willow Beach; Katherine; Bullhead City* (Austin); Hemenway Wash; Eldorado Canyon (Austin, Schwartz); Blue Point Spring; Corrall Spring; Southern Nevada Water Project Pump #2; Whitmore Point; Tyro Wash (Schwartz); Rogers Spring (Austin, Schwartz).

Phrynosoma platyrhinos (desert horned lizard)

The horned lizard is a locally abundant species found throughout LMNRA at the lower elevations. It reaches its greatest abundance in sandy areas and is usually absent from very rocky regions.

SPECIMENS EXAMINED: 7 miles west of Logandale* (UNLV R1095); Valley of Fire* (UNLV R1111); Lake Mead Naval Base* (UNLV R624-626, R652, R653); Frenchman Mountain* (UNLV R4021); Las Vegas Wash* (UNLV R404); Boulder Beach (LMNRA #592); Boulder City* (UNLV R1333, LMNRA #632, #2590); Eldorado Canyon (UNLV R1105); 3 to 5 miles north of Searchlight* (UNLV R4006); Searchlight* (UNLV R67); 0.4 and 9 miles east of U.S. 95 on Nevada 77* (UNLV R4054, R4073); 10.5 miles west of Davis Dam (UNLV R4069); Parashaunt Canyon (LMNRA #664).

ADDITIONAL RECORDS: Valley of Fire*, Boulder City*, Boulder Wash (Linsdale 1940); Boulder Dam, Lake Mead, Fort Mohave (Reeve 1952); Las Vegas Wash* (Bradley and Niles 1973); Diamond Creek, Emory Falls (MNA 1974).

OBSERVATIONS: Valley of Fire*; North Shore Road, 5 miles north of Callville; Hemenway Wash; Boulder City*; Cottonwood Cove; 1 mile west of Davis Dam; mouth of Grapevine Canyon; Temple Bar; Willow Beach area (Austin); Corrall Spring, Whitmore Point (Schwartz).

Phrynosoma douglassi (short-horned lizard)

This species is rarely recorded and is found on the Shivwits Plateau at elevations exceeding 5500 ft. The old record for St. Thomas may be in error.

SPECIMENS EXAMINED: near Dome Sawmill, Shivwits Plateau (UNLV R1330); Twin Peaks Point, Shivwits Plateau (UNLV R1329).

ADDITIONAL RECORDS: St. Thomas (Yarrow 1882); Kaibab Plateau* (Stebbins 1954).

OBSERVATIONS: None.

XANTUSIDAE

Xantusia vigilis (yucca night lizard)

The night lizard is locally abundant, especially in the vicinity of Joshua trees and other yuccas. It is very secretive and is most often found by examining debris at bases of living yuccas and the remains of dead ones.

SPECIMENS EXAMINED: 0.5 mile north of Lake Mead Marina on Las Vegas Wash Road (UNLV R4121); Railroad Pass* (UNLV R2839); 8 miles north of Searchlight* (UNLV R2807); 2-9 miles east of U.S. 95 on Nevada 77* (UNLV R4144-4150, R4185, R4208-4236).

ADDITIONAL RECORDS: None.

OBSERVATIONS: Newberry Mountains; between Temple Bar and Pierce Ferry (Austin).

TEIDAE

Cnemidophorus tigris (western whiptail)

The whiptail is probably the most abundant lizard in LMNRA next to Uta stansburiana. It occurs in a wide variety of habitats at elevations to at least 5000 ft.

SPECIMENS EXAMINED: Lake Mead area (UNLV R45, R46, R392, R393); St. Thomas (UNLV R1338); Valley of Fire* (UNLV R1005); Sunrise Mountain* (UNLV R967, R988-990, R1010); junction of North Shore Road and Lake Mead Blvd. (UNLV R4551); Las Vegas Wash (UNLV R1443); 0.5 mile north of Lake Mead Marina (UNLV R4406, R4540); Hemenway Wash (UNLV R1335, R1339); Boulder City* (UNLV R882, R883, R1334, R1336, R1337, LMNRA #647); 2-3 miles south of Railroad Pass* (UNLV R968, R977); 8 miles west of Nelson* (UNLV R4524); Eldorado Canyon, 2 miles east of Nelson (UNLV R1689); 1-13 miles north of Searchlight* (UNLV R1499, R1502-1507, R1528, R1529, R1618, R1631, R1637, R1640, R1645, R2157); 4.5 miles east of Searchlight (UNLV R1636, R1491-1498); 4.5 miles west of Cottonwood Cove (UNLV R1617); Cottonwood Cove (UNLV R993-995); 0.5-4 miles east of U.S. 95 on Nevada 77* (UNLV R911, R935, R936, R962, R963, R963a, R964, R966, R981-985, R1009, R1012-1018); 3 miles south-2 miles west of Davis Dam* (UNLV R4287); road to White Hills* (UNLV R902); Surprise Canyon (UNLV R554).

ADDITIONAL RECORDS: Callville Bay, Muddy and Virgin River Valleys*, Callville (VanDenburgh 1922); Hemenway Wash, mouth of Boulder and Las Vegas Washes (Cowles and Bogert 1936); St. Thomas, Muddy River Valley*, mouth of Virgin River, Valley of Fire*, Boulder City*, 2 and 5 miles southeast of Overton (Linsdale 1940); Whitmore Wash, Stantons Cave (MNA 1974).

OBSERVATIONS: Overton*; Valley of Fire*; North Shore Road; Las Vegas Wash; Cottonwood Cove; Grapevine Canyon; Davis Dam; Temple Bar; road to Pierce Ferry; Kingman Wash; Willow Beach; Katherine (Austin); Quartermaster Viewpoint (LMNRA); Echo Bay; Rogers Spring; Callville Bay; Eldorado Canyon (Austin, Schwartz); Hemenway Wash; Blue Point Spring; St. Thomas Wash; Southern Nevada Water Project Pump #2; Boulder Beach Sewage Pond; Christmas Tree Pass; Whitmore Point (Schwartz).

Cnemidophorus velox (plateau whiptail)

Locally common but limited in distribution in LMNRA to the pinyon-sagebrush habitats on the Shivwits Plateau.

SPECIMENS EXAMINED: Twin Point, Shivwits Plateau (UNLV).

ADDITIONAL RECORDS: None.

OBSERVATIONS: Shivwits Plateau (Austin).

HELODERMATIDAE

Heloderma suspectum (gila monster)

The gila monster is rare in LMNRA with its distribution limited nearly exclusively to the low valleys along the Colorado River drainage.

SPECIMENS EXAMINED: 15 miles south of Overton on Echo Bay Road (UNLV R844); 8 miles west of Echo Bay turnoff on North Shore Road (UNLV R3282); Boulder City* (LMNRA #635); Railroad Pass* (LMNRA #636); Lake Mead Boat Dock (LMNRA #606).

ADDITIONAL RECORDS: Overton*, St. Thomas (Linsdale 1940); 8 miles east of Nelson, Colorado River (LaRivers 1942); Valley of Fire*, Boulder City*, Las Vegas Wash*, Eldorado Canyon (Deming 1953); Overton* (Bogert and del Campo 1956); Nelson* (Baker ms.); along Colorado River and Lake Mead, Echo Bay

(Bradley and Deacon 1966b); mile 209 on Colorado River, Diamond Creek (MNA 1974).

OBSERVATIONS: Black Canyon overlook; Pyramid Island; Boulder Beach; 0.5 mile northeast of Rogers Spring; Katherine (LMNRA).

LEPTOTYPHLOPIDAE

Leptotyphlops humilis (western worm snake)

This secretive burrowing species is rarely recorded in LMNRA but may be more common than the few occurrences suggest.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Overton* (Grater 1939); Boulder Dam (Klauber 1940b); Las Vegas Wash* (Bradley and Niles 1973); Lake Mead area (Baker ms.).

OBSERVATIONS: Cottonwood Cove (LMNRA).

COLUBRIDAE

Diadophis regalis (regal ring-necked snake)

This small snake is represented by one record near LMNRA. Additional individuals are to be expected in damp areas. There are very few records for southern Nevada.

SPECIMENS EXAMINED: Boulder City (LMNRA #613).

ADDITIONAL RECORDS: 1 km east of Nelson (Cobb et al. ms.).

OBSERVATIONS: None.

Phyllorhynchus decurtatus (spotted leaf-nosed snake)

This uncommon snake can be expected at low elevations throughout LMNRA. It may be more common than the records suggest.

SPECIMENS EXAMINED: Hemenway Wash (UNLV R1343); Boulder City* (UNLV R1344); North Shore Road (UNLV R3440, R3505); 16.2 miles north of intersection of U.S. 95 and Cottonwood Cove Road* (UNLV R3434); 3 miles northwest of Willow Beach Road on U.S. 93 (UNLV R3536); Cottonwood Cove Road, 5.6 miles east of U.S. 95 (UNLV R4981).

ADDITIONAL RECORDS: mouth of Virgin River, Boulder City* (Grater 1939); Las Vegas Wash (Bradley and Niles 1973).

OBSERVATIONS: Las Vegas Wash (LMNRA).

Coluber constrictor (racer)

The status of this species in southern Nevada and LMNRA is in doubt. All records are old and it has not been reported in recent years.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Overton* (VanDenburgh 1922); mouth of Boulder Wash, Boulder City*, Black Canyon (Cowles and Bogert 1936); Colorado River on Lake Mead, Boulder Dam (Stebbins 1954).

OBSERVATIONS: None.

Masticophis flagellum (common whipsnake)

This and Pituophis melanoleucus are the two most abundant species of snake in LMNRA. It may be expected in all habitats but especially at the lower elevations. The species is primarily diurnal, but is also found commonly on roads at night.

SPECIMENS EXAMINED: 2.9 miles north of Lake Shore Road on North Shore Road (UNLV R3320); 9 miles north of Lake Mead Blvd. on North Shore Road (UNLV R3329); 2 miles west of U.S. 93 on Lake Shore Road* (UNLV R3328); 14.8 miles east of Henderson on Lake Shore Road (UNLV R3321); Boulder City* (UNLV R1319, R1407-1410, LMNRA #597); Cottonwood Cove Road (UNLV R1405); 5 and 15 miles south of Searchlight (UNLV R1417, R3323); 1.9 miles east of U.S. 95 on Nevada 77* (UNLV R3297); 1.4 miles west of Willow Beach turnoff (UNLV R127); Katherine Wash (UNLV R283); 2 miles east of Davis Dam (UNLV R284).

ADDITIONAL RECORDS: mouth of Boulder Wash, Boulder City*, Black Canyon (Cowles and Bogert 1936); Virgin Mountains*, Overton*, mouth of Virgin River, Colorado River, 3 and 20 miles above Boulder Dam (Linsdale 1940); Diamond Creek, Emory Falls (MNA 1974).

OBSERVATIONS: Gold Butte*; Overton*; Valley of Fire*; Rogers Spring*; North Shore Road, 3 miles south of Echo Bay; Callville Bay; Eldorado Canyon; Grapevine Canyon; 2 miles east of Temple Bar; Willow Beach (Austin); ¼ mile north of Lake Mead Lodge turnoff; Southern Nevada Water Project Pump #2 (Schwartz); LMNRA Visitors Center; Cottonwood Cove (LMNRA).

Masticophis taeniatus (desert striped whipsnake)

The striped whipsnake is rare and apparently limited in its distribution in LMNRA to the Shivwits Plateau.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: None.

OBSERVATIONS: Green Springs, Shivwits Plateau (Austin).

Salvadora hexalepis (western patch-nosed snake)

The patch-nosed snake is common throughout much of the low elevation areas of LMNRA.

SPECIMENS EXAMINED: Valley of Fire* (UNLV R125); Lakeview Point (UNLV R1346); Boulder City* (UNLV R1345, LMNRA #607); 6.2 miles south of Eldorado Canyon turnoff on U.S. 95* (UNLV R3359); 8 and 25 miles south of Searchlight* (UNLV R3346, R3347).

ADDITIONAL RECORDS: Virgin River near St. Thomas, Colorado River at 20 miles above Boulder Dam (Linsdale 1940); Valley of Fire* (Bradley and Deacon 1966a); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: North Shore Road, 5 miles south of Echo Bay; Callville Bay; Eldorado Canyon; 1.5 miles west of Lake Mohave; 1.0 mile west of Davis Dam; road to Willow Beach (Austin); Cottonwood Cove Ranger Station (LMNRA).

Arizona elegans (glossy snake)

The glossy snake is found occasionally at the lower elevations of LMNRA. It prefers sandy areas.

SPECIMENS EXAMINED: Sunrise Mountain* (UNLV R1993); Boulder City* (LMNRA #603); 2.2 miles east of Boulder City (UNLV R4871); 1.5 to 8 miles south of Railroad Pass (UNLV R1994, R3386, R3388, R4870); 6.8 miles east of U.S. 95 on Nevada 77 (UNLV R3416).

ADDITIONAL RECORDS: mouth of Virgin River, Boulder Dam region (Linsdale 1940); Kaolin, Boulder City* (Klauber 1946); Boulder City* (Deming 1953).

OBSERVATIONS: Eldorado Canyon; Katherine (Austin).

Pituophis melanoleucus (gopher snake)

This species and Masticophis flagellum are the most abundant snakes encountered in LMNRA. Records exist for nearly all of the low elevation portions of the area and it is expected to occur to at least 7000 ft.

SPECIMENS EXAMINED: North Shore Road (UNLV R3270); 2 miles southwest of Boulder City* (UNLV R448); 10.8 miles east of U.S. 95 on road to Nelsons Landing (UNLV R3253); U.S. 95 between Railroad Pass and Searchlight* (UNLV R192, R1750, R3245, R3263); 16.7 miles east of Searchlight on Nevada 60 (UNLV R3280); 2 miles east of U.S. 95 on Nevada 77* (UNLV R3214); 6 miles north of Grasshopper Junction* (UNLV R241); 2.6 miles west of U.S. 66 on Arizona 68* (UNLV R3268); Katherine Wash (UNLV R270).

ADDITIONAL RECORDS: 1 mile south of Rogers Spring, 10 miles south of Overton (Linsdale 1940); Boulder City*, Virgin River, Lake Mohave, Rogers Spring (Klauber 1947); Overton* (Deming 1953); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: Shivwits Plateau; Overton*; Echo Bay; Valley of Fire*; North Shore Road; Boulder Beach; Eldorado Canyon; Willow Beach; Cottonwood Cove; Grapevine Canyon (Austin); Christmas Tree Pass (LMNRA, Schwartz).

Lampropeltis getulus (common king snake)

The king snake is occasional but widespread in a variety of habitats throughout the lower elevations of LMNRA.

SPECIMENS EXAMINED: Rogers Spring (UNLV R1118); 14 and 22 miles east of Lake Mead turnoff on North Shore Road (UNLV R3377,

R3378); Las Vegas Bay (LMNRA #3643).

ADDITIONAL RECORDS: Overton*, St. Thomas (Blanchard 1921); Boulder City sewage disposal plant* (Cowles and Bogert 1936); Muddy Valley, Boulder City, Gold Butte (Deming 1953); Lake Mead area (Baker ms.).

OBSERVATIONS: Willow Beach; Grapevine Canyon (Austin); Christmas Tree Pass (Schwartz).

Rhinocheilus lecontei (long-nosed snake)

This snake is occasional but apparently widespread at the lower elevations of LMNRA.

SPECIMENS EXAMINED: North Shore Road, 4-25 miles south of Echo Bay (UNLV R3632, R3634, R4823); base of Sunrise Mountain* (UNLV R3649); Boulder City* (LMNRA #590); U.S. 95 from Searchlight to 15.5 miles north of Searchlight* (UNLV R3636, R3647, R3685, R4828); 7.4 miles northwest of Nelsons Landing (UNLV R89); 1 mile east of Searchlight on Cottonwood Cove Road (UNLV R2125).

ADDITIONAL RECORDS: Boulder City* (Linsdale 1940); Boulder City*, Hemenway Wash (Klauber 1941).

OBSERVATIONS: Willow Beach Road; 2 miles west of Davis Dam on Nevada 77 (Austin).

Sonora semiannulata (western ground snake)

The ground snake is rarely recorded in LMNRA but may be more common than the records indicate.

SPECIMENS EXAMINED: Railroad Pass* (UNLV R2139); Boulder City* (UNLV R851, R1340, R2140, R3702); Lake Mead Boat Dock (UNLV R1341).

ADDITIONAL RECORDS: 10 miles above Lake Mead on Virgin River (Tanner 1940); Nelson (Vanderhorst 1941); Boulder City*, Hemenway Wash (Deming 1953); Las Vegas Wash* (Bradley and Niles 1973); Fortification Mountain, 3 miles northeast of Boulder Dam (Cowles and Bogert 1936).

OBSERVATIONS: Cottonwood Cove area (LMNRA).

Chionactis occipitalis (western shovel-nosed snake)

This nearly completely nocturnal snake is occasional in LMNRA but it is probably more common than the records indicate. It occurs most often in the low desert with sparse vegetation.

SPECIMENS EXAMINED: 1 mile east of Searchlight on Cottonwood Cove Road (UNLV R2132).

ADDITIONAL RECORDS: Boulder City* (Deming 1953); Las Vegas Wash (Bradley and Niles 1973).

OBSERVATIONS: North Shore Road; 3.0 miles north of Callville Bay; Eldorado Canyon; Willow Beach Road (Austin).

Trimorphodon lambda (Arizona lyre snake)

The lyre snake is occasional in LMNRA and found principally in rocky areas in the low desert.

SPECIMENS EXAMINED: 30.7 miles south of Echo Bay on North Shore Road (UNLV R4971); U.S. 93 between Lake Shore Road and Boulder City* (UNLV R2006, R2007); Lake Shore Road just south of junction with Park Service residence (UNLV R2008); 2 miles south of Nelson (UNLV R1990); Lake Mead area (Baker ms.).

ADDITIONAL RECORDS: near Boulder Dam (Linsdale 1940); Boulder City* (Klauber 1940a); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: Lake Mohave (LMNRA).

Hypsiglena torquata (spotted night snake)

The night snake is rarely recorded in LMNRA but may be more common than indicated. It is to be expected in rocky areas in the low desert where it may be found by day under rocks.

SPECIMENS EXAMINED: 1 mile west of Callville Bay Road on North Shore Road (UNLV R4861); 9 miles east of junction of U.S. 95 and Nevada 77 (UNLV R3558).

ADDITIONAL RECORDS: Hemenway Wash (Deming 1953).

OBSERVATIONS: Christmas Tree Pass (Austin); Cottonwood Cove (LMNRA).

CROTALIDAE

Crotalus atrox (western diamond rattlesnake)

This rattlesnake is rare in the LMNRA area and has been recorded only in the Colorado River Valley south of Eldorado Canyon.

SPECIMENS EXAMINED: 1 mile south of Searchlight on U.S. 95* (UNLV R5118); east side of Summit Pass between Bullhead City and Kingman* (UNLV R383).

ADDITIONAL RECORDS: Colorado River opposite Fort Mohave*, near Nelson* (Deming 1953); southern tip of Nevada* (Klauber 1956); Searchlight* (Anderson and Emmerson 1970).

OBSERVATIONS: None.

Crotalus cerastes (sidewinder)

This is the most abundant rattlesnake in LMNRA and is found especially in sandy areas of the low valleys.

SPECIMENS EXAMINED: Valley of Fire* (UNLV R3075, R3078, R3099); North Shore Road (UNLV R3204); 42.7 miles south of Echo Bay on North Shore Road (UNLV R4920, R4948); Hemenway Wash (UNLV R1353, LMNRA #574); Lake Mead Boat Harbor (UNLV R1348); Boulder City* (UNLV R1349-1351); Railroad Pass* (UNLV R4940); 2.5 and 5 miles south of Railroad Pass* (UNLV R1352, R3095); 1 mile north of Eldorado Canyon on U.S. 95* (UNLV R3053); 8 miles north of Searchlight on U.S. 95* (UNLV R3046); 3.4 miles southeast of Searchlight* (UNLV R3083); 0.5 mile north of Bullhead City (UNLV R242); Katherine Wash (UNLV R1347).

ADDITIONAL RECORDS: Hemenway Wash (Cowles and Bogert 1936); south of St. Thomas, 3 miles above Boulder Dam (Linsdale 1940); lower Muddy Valley, Valley of Fire*, islands in Lake Mead, Boulder Dam, Newberry Mountains, 1½ miles northwest of Fort Mohave* (Klauber 1944); Boulder City* (Deming 1953).

OBSERVATIONS: North Shore Road; 5 miles south of Echo Bay; Las Vegas Wash; Eldorado Canyon; Grapevine Canyon; 0.5 mile west of Davis Dam (Austin); Cottonwood Cove (LMNRA); St. Thomas Wash, Blue Point Spring, Corrall Spring, Echo Bay, 15 miles ENE of Callville Bay on North Shore Road (Schwartz).

Crotalus mitchelli (speckled rattlesnake)

The speckled rattlesnake is abundant and widespread at lower elevations of LMNRA. It is generally found in rocky areas.

SPECIMENS EXAMINED: 31 miles northeast of Lake Mead Blvd. on North Shore Road (UNLV R1958); 35.1 miles south of Echo Bay on North Shore Road (UNLV R4960); Sunrise Mountain* (UNLV R3138); Boulder City (LMNRA #572, UNLV R1354); 1.5 miles north of Willow Beach on west shore of Colorado River (UNLV R271, R449); Eldorado Canyon (UNLV R272); Cottonwood Cove Road, 5.5 miles east of U.S. 95 (UNLV R3143); 4 miles west of Davis Dam (UNLV R274); 10.5 miles west of Davis Dam (UNLV R3163); 0.5 mile southwest of Fortification Hill (LMNRA #3644); Willow Beach Boat Dock (UNLV R273).

ADDITIONAL RECORDS: Vegas Wash, Las Vegas landing, Boulder City* (Linsdale 1940); canyons near Boulder City, Eldorado Canyon, Nelson* (Deming 1953); Emory Falls (MNA 1974).

OBSERVATIONS: North Shore Road, 7.5 miles south of Echo Bay, Railroad Pass*, Grapevine Canyon (Austin); Boulder Beach Visitor Center, Cottonwood Cove, Cottonwood Road east (Arizona) (LMNRA); Southern Nevada Water Project Pump #2 (Schwartz).

Crotalus scutulatus (Mojave rattlesnake)

This species is occasional over a wide elevational range in LMNRA but is most often encountered in low desert.

SPECIMENS EXAMINED: 9 miles south of Eldorado Canyon turnoff* (UNLV R287); 1.5 miles north of Searchlight* (UNLV R3188); 5.5 miles east of U.S. 95 on Cottonwood Cove Road (UNLV R3172); 5 miles south of Searchlight* (UNLV R275); 2.0 miles east of U.S. 95 on Nevada 77* (UNLV R3189); 12 miles west of Davis Dam* (UNLV R243); 14.3 miles east of Davis Dam* (UNLV R3179).

ADDITIONAL RECORDS: Las Vegas Wash (Bradley and Niles 1973).

OBSERVATIONS: 1.8 miles west of Lake Mead Ranger Station (LMNRA); Christmas Tree Pass; road between Temple Bar and Pierce Ferry (Austin); Summit of Mt. Dellenbaugh (Holland); Southern Nevada Water Project Pump #2 (Schwartz).

LITERATURE CITED

Anderson, B.B. and F.H. Emmerson. 1970. The rattlesnake Crotalus atrox in southern Nevada. Great Basin Natur. 39:107.

Baker, L.R. Annotated checklist of the herptiles in southern Nevada. Unpubl. ms. on file at Univ. Nevada, Las Vegas.

Banta, B.H. 1961. On the occurrence of Hyla regilla in the lower Colorado River, Clark County, Nevada. Herpetol. 17:106-108.

_____ and W.W. Tanner. 1964. A brief historical resume of herpetological studies in the Great Basin of the western United States. Part I. The Reptiles. Great Basin Natur. 24:37-57.

Blanchard, F.N. 1921. A revision of the king snakes: genus Lampropeltis. U.S. Natl. Mus. Bull. 114.

Bogert, C.M. and R.M. del Campo. 1956. The gila monster and its allies. The relationships, habits, and behavior of the lizards of the family Helodermatidae. Bull. Amer. Mus. Nat. Hist. 109:1-238.

Bradley, W.G. and J.E. Deacon. 1966a. Amphibian and reptile records for southern Nevada. Southwest Natur. 11:132-134.

_____ and _____. 1966b. Distribution of the gila monster in the northern Mohave Desert. Southwest Natur. 11:132-134.

_____ and W.E. Niles. 1973. Study of the impact on the ecology of Las Vegas Wash under alternative actions in water quality management. Final report to Las Vegas Valley Water District.

Cobb, W.J., R. Burkhart, and J.R. Lannom. The regal ring-necked snake, Diadophis punctatus regalis, in Clark County, Nevada. Unpubl. ms.

Cope, E.D. 1883. Notes on the geographical distribution of Batrachia and Reptilia in western North America. Proc. Acad. Natur. Sci. Philadelphia 35:10-35.

Cowles, R.G. and C.M. Bogert. 1936. The herpetology of the Boulder Dam region (Nevada, Arizona, Utah). Herpetol. 1:33-42.

Deming, O.V. 1953. The flora and fauna of Clark County, Nevada. Unpubl. ms.

Grater, R.K. 1939. A check list of the reptiles and amphibians of the Boulder Dam Recreational Area. Natl. Park Serv., Boulder City, Nevada. 7 pp. (mimeo).

Kay, F.R. and W.G. Bradley. 1968. The occurrence and distribution of the eastern fence lizard (Sceloporus undulatus) in southern Nevada. Herpetol. 24:72-76.

Klauber, L.M. 1932. Amphibians and reptiles observed enroute to Hoover Dam. Copeia 118-128.

_____. 1940a. The lyre snakes (genus Trimorphodon) of the United States. Trans. San Diego Soc. Natur. Hist. 9:163-194.

_____. 1940b. The worm snakes of the genus Leptotyphlops in the United States and northern Mexico. Trans. San Diego Soc. Natur. Hist. 9:87-162.

_____. 1941. The long-nosed snakes of the genus Rhinocheilus. Trans. San Diego Soc. Natur. Hist. 9:289-322.

_____. 1944. The sidewinder, Crotalus cerastes, with description of a new sub-species. Trans. San Diego Soc. Natur. Hist. 10:91-126.

_____. 1945. The geckos of the genus Coleonyx, with descriptions of a new subspecies. Trans. San Diego Soc. Natur. Hist. 10:133-216.

_____. 1946. The glossy snake, Arizona, with descriptions of new subspecies. Trans. San Diego Soc. Natur. Hist. 10:311-398.

_____. 1947. Classification and ranges of the gopher snakes of the genus Pituophis in the western United States. Bull. Zool. Soc. San Diego 22:1-81.

_____. 1956. Rattlesnakes. Their habits, life histories, and influence on mankind. Univ. California Press, Berkeley.

LaRivers, I. 1942. Some new amphibian and reptile records for Nevada. J. Ent. and Zool. 34:53-68.

Linsdale, J.M. 1940. Amphibians and reptiles in Nevada. Proc. Amer. Acad. Arts and Sci. 73:197-257.

Lowe, C.H. (ed.) 1964. The vertebrates of Arizona. Univ. Arizona Press, Tucson.

Museum of Northern Arizona. 1974. History and bibliography of biological research in the Grand Canyon National Park with emphasis on the riparian zone. Unpubl. ms.

Phelan, R.L. and R.H. Brattstom. 1955. Geographic variation in Sceloporus magister. Herpetol. 11:1-14.

Reeve, W.L. 1952. Taxonomy and distribution of the horned lizards, genus Phrynosoma. Univ. Kansas Sci. Bull. 34:817-960.

Shannon, F.A. 1950. Some additional remarks on the status of the species Sceloporus occidentalis. Herpetol. 6:31-32.

Shaw, C.E. 1945. The chuckwallas, genus Sauromalus. Trans. San Diego Soc. Nat. Hist. 10:269-306.

Stebbins, R.C. 1951. Amphibians of western North America. Univ. California Press, Berkeley.

_____. 1954. Amphibians and reptiles of western North America. McGraw-Hill Book Co., Inc., New York.

Stejneger, L.H. 1893. Annotated list of the reptiles and batrachians collected by the Death Valley Expedition in 1891, with description of new species. North Amer. Fauna 7:159-229.

Tanner, W.W. 1940. Notes on the herpetological specimens added to the Brigham Young University Vertebrate Collections during 1939. Great Basin Natur. 1:138-146.

VanDenburgh, J. 1922. The reptiles of western North America. Vol. I, Lizards, Vol. II, Snakes and turtles. Occas. Pap. California Acad. Sci. 10:1-611, 617-1028.

_____ and J.R. Slevin. 1921. A list of the amphibians and reptiles of Nevada, with notes on the species in the collection of the Academy. Proc. California Acad. Sci. 11:27-38.

Vanderhorst, A. 1941. Southern Nevada reptile notes. Nevada Acad. Sci. News Letter 1:1 (mimeo).

Yarrow, H.C. 1875. Report upon the collections of batrachians and reptiles made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona, during the years 1871, 1872, 1873 and 1874. Report, Geographical and Geological Explorations and Surveys West of 100th Meridian (Wheeler Survey), Vol. 5, Zoology, Ch. 5, pp. 509-584.

_____. 1882. Check list of North American Reptilia and Batrachia with catalogue of specimens in U.S. National Museum. Bull. U.S. Natl. Mus. No. 24.

_____ and H.W. Henshaw. 1878. Report upon the reptiles and batrachians collected during the years 1875, 1876, and 1877, in California, Arizona, and Nevada. Appendix L of Annual Report, Chief of Engineers for 1878. Geographical and Geological Surveys of Territory of United States West of 100th Meridian under the direction of Lieut. George M. Wheeler, Washington, D.C., pp. 206-226.

INDEX

Ambystoma tigrinum, 6
Ambystomidae, 6
Arizona elegans, 24
Bufo cognatus, 6
Bufo microscaphus, 7
Bufo punctatus, 7
Bufo woodhousei, 7
Bufonidae, 6
bullfrog, 9
Callisaurus draconoides, 13
Chelydridae, 10
Chionactis occipitalis, 26
chuckwalla, 13
Cnemidophorus tigris, 19
Cnemidophorus velox, 20
Coleonyx variegatus, 11
Coluber constrictor, 22
Colubridae, 21
Crotalidae, 27
Crotalus atrox, 27
Crotalus cerastes, 27
Crotalus mitchelli, 28
Crotalus scutulatus, 28
Crotaphytus collaris, 14
Crotaphytus wislizeni, 14
Diadophis regalis, 21
Dipsosaurus dorsalis, 12
frog, canyon tree, 8
    leopard, 9
    pacific tree, 8
gecko, western banded, 11
Gekkonidae, 11
gila monster, 20
Gopherus agassizi, 10
Heloderma suspectum, 20
Helodermatidae, 20
Hyla arenicolor, 8
Hyla regilla, 8
Hylidae, 8
Hypsiglena torquata, 26
Iguanidae, 12
Kinosternon flavescens, 10
Lampropeltis getulus, 24
Leptotyphlopidae, 21
Leptotyphlops humilis, 21
lizard, collared, 14
    desert crested, 12
    desert horned, 18
    desert spiny, 15
    eastern fence, 15
    leopard, 14
    long-tailed brush, 16
    sagebrush, 16
    short-horned, 18
    side-blotched, 17
    tree, 16
    western fence, 15
    yucca night, 19
    zebra-tailed, 13
Masticophis flagellum, 22
Masticophis taeniatus, 23
Pelobatidae, 6
Phrynosoma douglassi, 18
Phrynosoma platyrhinos, 18
Phyllorhynchus decurtatus, 22
Pituophis melanoleucus, 24
racer, 22
Rana catesbeinana, 9
Rana pipiens, 9
Ranidae, 9

rattlesnake, Mojave, 28
speckled, 28
western diamond, 27
Rhinocheilus lecontei, 25
salamander, tiger, 6
Salvadora hexalepis, 23
Sauromalus obesus, 13
Scaphiopus hammondi, 6
Sceloporus graciosus, 16
Sceloporus magister, 15
Sceloporus occidentalis, 15
Sceloporus undulatus, 15
sidewinder, 27
snake, Arizona lyre, 26
common king, 24
glossy, 24
gopher, 24
long-nosed, 25
regal ring-necked, 21
spotted leaf-nosed, 22
spotted night, 26
western ground, 25
western patch-nosed, 23
western shovel-nosed, 26
western worm, 21
Sonora semiannulata, 25
spadefoot, western, 6
Teidae, 19
Testudinidae, 10
toad, desert, 7
great plains, 6
southwestern, 7
Woodhouse's, 7
tortoise, desert, 10
Trimorphodon lambda, 26
Trionychidae, 11
Trionyx ferox, 11
turtle, spiny soft-shelled, 11
yellow mud, 10
Urosaurus graciosus, 16
Urosaurus ornatus, 16
Uta stansburiana, 17
whipsnake, common, 22
desert striped, 23
whiptail, plateau, 20
western, 19
Xantusia vigilis, 19
Xantusidae, 19

MAMMALS

OF THE

LAKE MEAD NATIONAL RECREATION AREA

SORICIDAE

Notiosorex crawfordi (desert shrew)

Rare, recorded only in the Las Vegas Wash area near LMNRA.

SPECIMENS EXAMINED: Las Vegas Wash* (UNLV M7000).

ADDITIONAL RECORDS: Henderson Slough* (Bradley and Moor 1968); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: None.

PHYLLOSTOMATIDAE

Macrotus californicus (California leaf-nosed bat)

Locally common in caves and mine shafts in the southern portions of LMNRA.

SPECIMENS EXAMINED: Hemenway Harbor (LMNRA #402-405, #479-482): 3.8 miles east of Cottonwood Cove Landing (UNLV M1408); Katherine Mine Drift (LMNRA #453, #457, #522, #526).

ADDITIONAL RECORDS: Hemenway Harbor (Baldwin 1944); Hemenway Wash; Jap Ranch, 14 miles east of Searchlight; Colorado River (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Katherine Mine drift and shaft (Baldwin 1944); Jackass Flats (Cockrum and Musgrove 1964b): Rockerfeller Mine (O'Farrell 1970).

OBSERVATIONS: mine shaft in Black Mountain, 10 miles east of Searchlight (LMNRA).

VESPERTILIONIDAE

Myotis yumanensis (Yuma myotis)

Recorded occasionally in the southernmost portion of LMNRA and a large colony has been reported roosting above the spillways at Davis Dam.

SPECIMENS EXAMINED: Davis Dam (UNLV M1065).

ADDITIONAL RECORDS: along Colorado River (Miller and Allen 1928); Fort Mohave* (Hall and Kelson 1959); 2 miles west of Union Pass (Cockrum and Musgrove 1964a).

OBSERVATIONS: Rockerfeller Mine (O'Farrell); Davis Dam (Musgrove, fide O'Farrell).

Myotis velifer (cave myotis)

Accidental with one record for Arizona opposite Nevada which may or may not have been within the boundaries of LMNRA.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Jackass Flats (Cockrum and Musgrove 1964b); Arizona, opposite Clark County (Hall 1946).

OBSERVATIONS: None.

Myotis occultus (Arizona myotis)

Records to date are for the southernmost tip of Nevada and across the river in Arizona. Could be expected in the southern portion of LMNRA.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: southern tip of Nevada along Colorado River* (Hall 1946); Fort Mohave* (Hall and Kelson 1959).

OBSERVATIONS: None.

Myotis thysanodes (fringed myotis)

Occasional in the lower elevations of LMNRA.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: 6 miles south of St. Thomas (Burt 1934); 1/2 mile northeast of Vulcans Throne (Hoffmeister and Durham 1971).

OBSERVATIONS: None.

Myotis californicus (California myotis)

One of the abundant bats, especially at low elevations, in LMNRA. It may be active throughout the year.

SPECIMENS EXAMINED: Boulder City (LMNRA #440, #449); Katherine Wash (LMNRA #524).

ADDITIONAL RECORDS: Boulder City* (Baldwin 1944); Dead Mountains* (Hall 1946); Stanton Cave (MNA 1974); 3 miles west of Lower Pigeon Spring*, 1/2 mile northeast of Vulcans Throne* (Hoffmeister and Durham 1971); 2 miles west of Union Pass* (Cockrum and Musgrove 1964a).

OBSERVATIONS: Grapevine Canyon (Austin).

Lasionycteris noctivagans (silver-haired bat)

Occasional near trees and water, especially during spring and fall.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Las Vegas Wash* (Bradley and Niles 1973); Gold Spring, Colorado River at 4 miles southwest of Pierce Ferry (Cockrum 1960).

OBSERVATIONS: Moapa Valley near Warm Springs*, Overton Wildlife Management Area (Austin).

Pipistrellus herperus (western pipistrelle)

The most abundant bat in LMNRA. It is found in a variety of habitats at low elevations. This is usually the first bat seen at dusk and the last one seen at dawn.

SPECIMENS EXAMINED: Juanita Springs Ranch* (UNLV M2766); Rogers Spring (LMNRA #466, #536); Boulder City (LMNRA #423, #445, #446, #497, #517); Goodwater Springs, Hualapai Plateau* (LMNRA #516).

ADDITIONAL RECORDS: Colorado River; Boulder City*; Rogers Spring; Cottonwood Springs (Deming 1953); Las Vegas Wash* (Bradley and Niles 1973); Pierce Ferry; Goodwater Spring (Baldwin 1944); 1/2 mile northeast of Vulcans Throne* (Hoffmeister and Durham 1971); Stantons Cave (MNRA 1974).

OBSERVATIONS: Overton Wildlife Management Area; Rogers Spring; Christmas Tree Pass; Grapevine Canyon (Austin).

Eptesicus fuscus (big brown bat)

Abundant at lower elevations throughout LMNRA; occasional at higher elevations on the Shivwit's Plateau. There is a large population at Davis Dam.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: 1/4 mile southwest of Kaolin*; Cedar Basin*; 6 miles south of St. Thomas (Hall 1946); St. Thomas (Deming 1953); Las Vegas Wash* (Bradley and Niles 1973); Fort Mohave*, Beales Spring (Cockrum 1960); 3 miles north of Mt. Dellenbaugh (Hoffmeister and Durham 1971).

OBSERVATIONS: Overton*; Grapevine Canyon (Austin); Davis Dam (O'Farrell).

Lasiurus borealis (red bat)

Occasional transient, most often seen in vicinity of trees.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Overton* (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: None.

Lasiurus cinereus (hoary bat)

Like the red bat, this large bat is an occasional transient that is most often seen roosting in trees during the day.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: Grapevine Canyon (Austin).

Plecotus townsendii (Townsend's big-eared bat)

Rare visitant although a large colony was reported in Bat Cave above Iceberg Canyon in 1976.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Rampart Cave (Baldwin 1944); 2 miles west of Union Pass* (Cockrum and Musgrove 1964a).

OBSERVATIONS: Bat Cave above Iceberg Canyon (Jones, fide O'Farrell).

Plecotus phyllotis (Allen's big-eared bat)

There are several records of this rare species for the vicinity of LMNRA. It may be expected in small numbers.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: 2 miles west of Union Pass*, 1 mile south of Union Pass*, 1 mile southwest of Union Pass* (Cockrum and Musgrove 1964a).

OBSERVATIONS: Cat Claw Spring near Gold Butte (O'Farrell).

Antrozous pallidus (pallid bat)

Widespread in LMNRA and not uncommon.

SPECIMENS EXAMINED: Hoover Dam (LMNRA #465, #535); Boulder Beach (LMNRA #452, #521); Boulder City* (LMNRA #430, #503).

ADDITIONAL RECORDS: 6 miles south of St. Thomas, Boulder City* (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: Overton Wildlife Management Area, Rogers Spring, Grapevine Canyon (Austin).

MOLOSSIDAE

Tadarida brasiliensis (Brazilian free-tailed bat)

This species is an abundant summer resident and transient in LMNRA, and is most often found roosting under bridges and in caves at low elevations, but occasional at high elevations on the Shivwit's Plateau.

SPECIMENS EXAMINED: Boulder City* (UNLV M23); Rogers Spring (LMNRA #468, #537).

ADDITIONAL RECORDS: St. Thomas; Rogers Spring; Overton*; Colorado River (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Diamond Creek; Fort Mohave* (Cockrum 1960); Shivwits Plateau (Hoffmeister and Durham 1971).

OBSERVATIONS: Overton Wildlife Management Area; Rogers Spring; Callville Bay; Boulder Beach; Grapevine Canyon; Pierce Ferry; Shivwits Fire Camp (Austin).

Tadarida macrotus (big free-tailed bat)

Recorded in LMNRA from Granite Wash where they were observed feeding.

SPECIMENS EXAMINED: Henderson* (UNLV M2669).

ADDITIONAL RECORDS: Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: Granite Wash (O'Farrell).

Eumops perotis (western mastiff bat)

This species has been recorded only at Granite Wash in the southern portion of LMNRA.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: None.

OBSERVATIONS: Granite Wash (O'Farrell).

LEPORIDAE

Sylvilagus nuttallii (Nuttall's cottontail)

This species prefers the higher elevations and, therefore, is the most common cottontail in the Shivwits Plateau area.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Shivwits Plateau; Twin Springs; Price Point (Baldwin 1944).

OBSERVATIONS: near Shivwits Fire Camp, Twin Point road (Austin); Mt. Dellenbaugh (Schwartz).

Sylvilagus audubonii (desert cottontail)

This lowland species is widespread throughout the lower elevations of LMNRA, especially in the vicinity of dense vegetation.

SPECIMENS EXAMINED: 4 miles north of Overton* (UNLV M20); Kaolin Reservoir (LMNRA #401, #478); Colorado River near Ft. Mohave* (LMNRA #451, #520).

ADDITIONAL RECORDS: 14 miles east of Searchlight; Dead Mountains*; St. Thomas; Kaolin Reservoir (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); lower end of Toroweap Valley*; Mud Spring* (Cockrum 1960); 1/2 mile east of Vulcans Throne* (Hoffmeister and Durham 1971).

OBSERVATIONS: 1/2 mile east of Detrital Wash on Temple Bar Road, Temple Bar Road near LMNRA boundary, Temple Bar Road at 8 miles from U. S. 93 junction, Willow Beach, Willow Beach Road (LMNRA), Gold Butte area*, Overton Wildlife Management Area, Las Vegas Wash, Davis Dam area, Temple Bar, Pierce Ferry Road near Pierce Ferry, Katherine (Austin); Bluepoint Spring, Rogers Spring, Echo Bay, Southern Nevada Water Project Pump #2, Spirit Mountain, Whitmore Point, Mt. Dellenbaugh, 12.5 miles southeast of Hoover Dam on U. S. 93 (Schwartz); Christmas Tree Pass, Grapevine Canyon (Austin, Blake, Schwartz).

Lepus californicus (black-tailed jackrabbit)

This abundant hare is widespread throughout the lower elevations of LMNRA and is found in all but the most barren areas. It is most common in areas with good growth of annuals, especially along roads.

SPECIMENS EXAMINED: Hoover Dam area (LMNRA #425, #498); Rampart Cave (LMNRA #2853).

ADDITIONAL RECORDS: 1/2 mile east of St. Thomas (Burt 1934); Hemenway Harbor, Lake Mead Lodge (Baldwin 1944); 6 miles south of St. Thomas, Colorado River (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Pierce Ferry (Baldwin 1944); Pierce Ferry, Colorado River (Cockrum 1960); Grapevine Springs*; (Hoffmeister and Durham 1971).

OBSERVATIONS: Pierce Ferry Campground, 3 miles north of U. S. 93 on Temple Bar Road (LMNRA); Overton Wildlife Management Area, North Shore Road (Echo Bay to Las Vegas Wash), Eldorado Canyon, Cottonwood Cove

Road, Davis Dam area, Twin Point, Mt. Dellenbaugh, Pierce Ferry area, Temple Bar area, Katherine (Austin); Christmas Tree Pass (Austin, Schwartz); Grapevine Canyon (Austin, Blake, Schwartz); St. Thomas Wash, Bluepoint Spring, Rogers Spring, Callville Bay, Las Vegas Bay, Boulder Beach, Southern Nevada Water Project Pump #2, Spirit Mountain, Whitmore Point, 12.5 miles southeast of Hoover Dam on U. S. 93, Tyro Wash (Schwartz).

SCIURIDAE

Eutamias dorsalis (cliff chipmunk)

Occasional and local on the Shivwits Plateau within LMNRA. It also occurs in the Gold Butte - Cedar Basin area near LMNRA.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Cedar Basin* (Burt 1934); Shivwits Plateau (Baldwin 1944); Oak Grove, northwest of Mt. Dellenbaugh, Green Springs, southeast of Mt. Dellenbaugh (Hoffmeister and Durham 1971).

OBSERVATIONS: Shivwits Fire Camp, Twin Point (Austin); Mt. Dellenbaugh (Schwartz).

Eutamias minimus (least chipmunk)

A small, distinctly striped chipmunk has been observed in the sagebrush and adjacent conifer areas near Mt. Dellenbaugh and is thought to be this species.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: None.

OBSERVATIONS: Mt. Dellenbaugh (Austin, Schwartz).

Ammospermophilus harrisii (Harris' antelope squirrel)

Widespread at low elevations in the Arizona portion of LMNRA but does not occur west of the Colorado River in Nevada.

SPECIMENS EXAMINED: 5 miles southwest of Chloride* (UNLV M2709); Willow Beach (UNLV M370, M371, M829, M830); Bullhead City* (UNLV M2497); Katherine Ranger Station (LMNRA #455, #456, #525); Goodwater Springs (LMNRA #420, #444, #496).

ADDITIONAL RECORDS: Gold Basin*; Fort Mohave* (Hall and Kelson 1959); Mud Spring*, Fort Mohave*, 8 miles southwest of Pierce Ferry, 4 miles southwest of Pierce Ferry, Gold Basin*, 20 miles south of Greggs Ferry, Old Searchlight Ferry (Cockrum 1960).

OBSERVATIONS: Pierce Ferry, Willow Beach, Katherine (Austin).

Ammospermophilus leucurus (white-tailed antelope squirrel)

This ground squirrel is the most abundant and widespread diurnal mammal in LMNRA. It occurs throughout the lower portions of the area to elevations of about 6000'.

SPECIMENS EXAMINED: Granite Springs* (UNLV M1398, M1399); Sunrise Mountain* (UNLV M1694); 0.5 mile southeast of Boulder City (UNLV M2548, M2767); road to dam below Boulder City (LMNRA #441); Railroad Pass* (UNLV M2420); Pakoon Springs Ranch* (UNLV M2383, M2394, M2395); Detrital Wash (UNLV M2677).

ADDITIONAL RECORDS: 0.5 mile east of St. Thomas; Cedar Basin*; Boulder City*; road to Boulder Dam; Colorado River, 14 miles east of Searchlight, southwest of Searchlight; Black Canyon (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Lakeview Point (Baldwin 1944); Grand Wash, 8 miles south of Pakoon Spring* (Cockrum 1960); 1/4 mile east of Grand Wash, Tasi Springs, Seven Springs (Hoffmeister and Durham 1971); Whitmore Wash (MNA 1974).

OBSERVATIONS: Overton Wildlife Management Area, Overton Beach, North Shore Road between Echo Bay and Callville Bay, Las Vegas Wash, Boulder Beach, Eldorado Canyon, Grapevine Canyon, Davis Dam, Pierce Ferry, road between Pierce Ferry and Temple Bar, Temple Bar, Detrital Wash, Kingman Wash (Austin); St. Thomas Wash, Bluepoint Spring, Rogers Spring, Corrall Spring, 15 miles ENE of Callville Bay on North Shore Road, Las Vegas Bay, Southern Nevada Water Project Pump #2, Black Canyon Wash, base of Spirit Mountain, Whitmore Point, Mt. Dellenbaugh, Tyro Wash (Schwartz); Echo Bay, Callville Bay, Christmas Tree Pass (Austin, Schwartz).

Spermophilus variegatus (rock squirrel)

These large squirrels are locally common in areas with large rocks which afford them cover.

SPECIMENS EXAMINED: Goodwater Springs, Hualapai Plateau* (LMNRA #443, #514).

ADDITIONAL RECORDS: Cedar Basin* (Hall 1946); Pierce Ferry (Baldwin 1944); 4 miles southwest of Pierce Ferry; 8 miles north of Pine Spring, Hualapai Indian Reservation*, Red Lake (Cockrum 1960); Waring Ranch House, Parashaunt Wash, Shivwits Plateau* (Hoffmeister and Durham 1971); Stantons Cave, Colorado River, Mile 198 (MNA 1974).

OBSERVATIONS: Christmas Tree Pass (Austin, Blake, Schwartz); Grapevine Canyon (LMNRA, Austin, Schwartz); Mt. Dellenbaugh, Twin Point (Austin).

Spermophilus tereticaudus (round-tailed ground squirrel)

The round-tailed ground squirrel is less common and more limited in it's distribution within LMNRA than A. leucurus. It is found only at low elevations especially along the river and lakes and prefers sandy areas with relatively thick vegetation. It's presence is most often determined by it's sharp whistle.

SPECIMENS EXAMINED: road to Boulder Beach (LMNRA #419, #495); Boulder City* (LMNRA #450, #519); Bullhead City (UNLV M2684).

ADDITIONAL RECORDS: Muddy Creek* (Burt 1934); Lower Muddy River Valley*; Colorado River below Hoover Dam; Boulder Beach; Lake Shore Road (Baldwin 1944); Boulder City*; below Hoover Dam; St. Thomas; Las Vegas Wash* (Bradley and Niles 1973); Colorado River opposite Clark County; Detrital Wash (Hall 1946); Fort Mohave*; Colorado River, Mile 204 (Hall and Kelson 1959).

OBSERVATIONS: Overton Wildlife Management Area, Davis Dam, Katherine (Austin).

GEOMYIDAE

Thomomys umbrinus (southern pocket gopher)

The pocket gopher is locally common in soft soil, especially near the river and at the higher elevations throughout LMNRA.

SPECIMENS EXAMINED: Boulder City* (LMNRA #305, #426, #432, #447, #462-464, #499, #518, #532-534); Cottonwood Cove Road (UNLV M2728); Pakoon Springs Ranch* (UNLV M2380, M2381, M2718).

ADDITIONAL RECORDS: Muddy River Valley*, Boulder City*, Durban Ranch, 14 miles east of Searchlight, St. Thomas, LMNRA, Black Canyon, mouth of Virgin River (Hall 1946); old Searchlight Ferry, Shivwits Plateau, Detrital Valley (Hall and Kelson 1959); Grand Wash, 8 miles south of Pakoon Springs*, Grand Wash, 6 miles south of Pakoon Springs*, Lookout Point, Gold Basin, 20 miles south of Greggs Ferry (Cockrum 1960); Mt. Dellenbaugh, Sullivan Ranch at 3 miles north of Mt. Emma*, 4 miles north-northeast of Vulcans Throne*, Toroweap Valley*; Waring Ranch House, Parashaunt Wash, Shivwits Plateau*, Oak Grove*, Seven Springs, Tasi Springs (Hoffmeister and Durham 1971).

OBSERVATIONS: Grapevine Canyon, Shivwit's Fire Camp (Austin).

HETEROMYIDAE

Perognathus longimembris (little pocket mouse)

The little pocket mouse is found locally in the lower elevations of LMNRA especially in the Nevada portion and marginally into the Arizona portion.

SPECIMENS EXAMINED: Falls Spring, Cedar Basin* (UNLV M949, M950); 2.5 miles east of Henderson* (UNLV M2438, M2444).

ADDITIONAL RECORDS: Boulder City*, southeast of Searchlight (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Boulder City* (Hall and Kelson 1959); Hoover Dam Ferry (Cockrum 1960).

OBSERVATIONS: Eldorado Canyon (Austin).

Perognathus amplus (Arizona pocket mouse) — no left

This species is fairly common south and west of the Colorado River in the Arizona portion of LMNRA.

SPECIMENS EXAMINED: Rim above Quartermaster Canyon (LMNRA #442, #513).

ADDITIONAL RECORDS: Pierce Ferry (Deming 1953); Detrital Wash (Hall and Kelson 1959); Pierce Ferry, Colorado River, 4 and 8 miles southwest of Pierce Ferry, Hoover Dam Ferry (Cockrum 1960).

OBSERVATIONS: 4 miles east of Bullhead City*, Granite Wash (O'Farrell); Detrital Wash (Austin).

Perognathus parvus (Great Basin pocket mouse)

This species is locally abundant on sagebrush flats in the Shivwits Plateau area.

SPECIMENS EXAMINED: Shivwits Plateau (UNLV).

ADDITIONAL RECORDS: Shivwits Plateau; Oak Grove, 3 miles north, 2 miles west of Mt. Dellenbaugh* (Hoffmeister and Durham 1971).

OBSERVATIONS: Shivwits Plateau (Austin).

Perognathus formosus (long-tailed pocket mouse)

This is the most widespread and abundant pocket mouse in LMNRA. It is found in relatively rocky areas in low desert and occurs in all but the higher elevation areas.

SPECIMENS EXAMINED: Fall Springs, Cedar Basin* (UNLV M964); island in Las Vegas Wash (LMNRA #416, #417, #492, #493); Hemenway Wash (LMNRA #470, #539); on lake near boat dock (LMNRA #409-412, #485-488); Railroad Pass* (UNLV M2431); 10 miles south of Railroad Pass, 1.5 miles east of US 93 (UNLV M3467).

ADDITIONAL RECORDS: 1/2 mile south of St. Thomas, 1/2 mile southeast of St. Thomas, Lost City*, island in Las Vegas Wash, 2 1/2 miles north of Hoover Dam Ferry, Cedar Basin*, Hemenway Wash, Colorado River, 14 miles east of Searchlight (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Grand Wash, 8 miles south of Pakoon Spring* (Cockrum 1960); Black Willow Springs*, Grapevine Spring*, Lake Mead, Vulcans Throne* (Hoffmeister and Durham 1971).

OBSERVATIONS: North Shore Road, Eldorado Canyon, mouth of Grapevine Canyon, Willow Beach (Austin); Echo Bay, Callville Bay, Southern Nevada Water Project Pump #2, Boulder Beach, Christmas Tree Pass, Spirit Mountain, Tyro Wash (Schwartz).

Perognathus penicillatus (desert pocket mouse)

This species is also widespread in LMNRA but considerably less common than Perognathus formosus.

SPECIMENS EXAMINED: Boulder Beach Road (LMNRA #474).

ADDITIONAL RECORDS: near St. Thomas (Burt 1934); Searchlight* (Baldwin 1944); 5 miles southeast of Overton*, 1/2 mile southeast of St. Thomas, island in "Boulder" Lake at mouth of Virgin River, Vegas Wash, Colorado River, below Hoover Dam, Jap Ranch, 14 miles east of Searchlight, opposite Fort Mohave* (Hall 1946); Muddy River*, above Hoover Dam (Deming 1953); 4 miles southwest of Pierce Ferry (Baldwin 1944); Fort Mohave*, old Searchlight Ferry, Colorado River (Cockrum 1960).

OBSERVATIONS: None.

Perognathus intermedius (rock pocket mouse)

The rock pocket mouse is found locally at the lower elevations of the Arizona portions of LMNRA.

SPECIMENS EXAMINED: Emory Falls (LMNRA #435, #508).

ADDITIONAL RECORDS: Rampart Cave, old Searchlight Ferry, Hoover Dam Ferry (Cockrum 1960).

OBSERVATIONS: 4 miles east of Bullhead City*, Granite Wash (O'Farrell).

Perognathus spinatus (spiny pocket mouse)

The spiny pocket mouse is represented by a single record which apparently is the northernmost record of the species.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Granite Springs (Ryser 1964).

OBSERVATIONS: None.

Dipodomys ordii (Ord's kangaroo rat)

Hypothetical. There is one record of this species near LMNRA.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: 3 miles north of Mt. Emma* (Hoffmeister and Durham 1971).

OBSERVATIONS: None.

Dipodomys microps (chisel-toothed kangaroo rat)

Rare but expected below the Shivwit's Plateau.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Grand Wash Cliffs (Hoffmeister and Durham 1971).

OBSERVATIONS: None.

Dipodomys merriami (Merriam's kangaroo rat)

This may be the most abundant mammal in LMNRA. It is found in nearly all low desert habitats and in smaller numbers in all but the highest elevations.

SPECIMENS EXAMINED: base of Sunrise Mountain* (UNLV M1316, M1439); Falls Spring, Cedar Basin (UNLV M960); Valley of Fire* (UNLV M621); Hemenway Wash (LMNRA #429, #502); island in Las Vegas Wash (LMNRA #413, #414, #489, #490); 1/8 mile west of Railroad Pass* (UNLV M2706); 1.5 miles south of Railroad Pass* (UNLV M3477); Pakoon Springs Ranch (UNLV M2372, M2396).

ADDITIONAL RECORDS: 5 miles southeast of Overton, Lost City*, St. Thomas, Valley of Fire*, island in Las Vegas Wash*, 2.5 miles north of Hoover Dam Ferry, Cedar Basin*, Boulder City*, Hemenway Wash, 14 miles east of Searchlight, opposite Fort Mohave* (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Fort Mohave*, Pierce Ferry, 4 miles southwest of Pierce Ferry, 8 miles southwest of Pierce Ferry, old Searchlight Ferry, Hoover Dam Ferry

(Cockrum 1960); 6 miles south of Pakoon Springs*, Grand Wash, Grapevine Springs*, Seven Springs, Tasi Springs, Lake Mead, Black Willow Spring*, Sullivan Ranch at 3 miles north of Mt. Emma*, 0.5 to 1 mile northeast of Vulcans Throne*, Dry (Toroweap) Lake*, 0.5 mile south of Dry Lake* (Hoffmeister and Durham 1971).

OBSERVATIONS: Overton Wildlife Management Area, North Shore Road between Echo Bay and Callville Bay, Las Vegas Wash; Eldorado Canyon, Grapevine Canyon, 0.5 mile south of Davis Dam, Temple Bar, Pierce Ferry, Willow Beach, Katherine (Austin); 4 miles east of Bullhead City*, Granite Wash (O'Farrell); St. Thomas Wash, Rogers Spring, Echo Bay, 15 miles ENE of Callville Bay on North Shore Road, Callville Bay, Las Vegas Bay, Boulder Beach, Southern Nevada Water Project Pump #2, Spirit Mountain, Tyro Wash (Schwartz); Christmas Tree Pass (Austin, Schwartz).

Dipodomys deserti (desert kangaroo rat)

This large kangaroo rat may be locally common at low elevations. It is not found in areas where sand is not at least 20 inches deep.

SPECIMENS EXAMINED: Overton* (LMNRA #461, #531); St. Thomas (LMNRA #406, #407, #483); base of Sunrise Mountain* (UNLV M1422, M1423).

ADDITIONAL RECORDS: 7 miles north of Lake Mead (on Virgin arm), 5 miles southeast of Overton, island in mouth of Virgin River, St. Thomas, 1/2 mile east of St. Thomas, Valley of Fire*, 14 miles east of Searchlight on Colorado River (Jap Ranch) (Hall 1946); Grand Wash, 8 miles south of Pakoon Spring*, Fort Mohave*, Colorado River, old Searchlight Ferry (Cockrum 1960); Black Willow Springs*, Seven Springs, Lake Mead at foot of Grand Wash (Hoffmeister and Durham 1971).

OBSERVATIONS: Valley of Fire* (Austin); Rogers Spring, St. Thomas Wash, Tyro Wash (Schwartz).

CASTORIDAE

Castor canadensis (beaver)

Occasional along the Colorado River and apparently most common in the Overton Wildlife Management Area.

SPECIMENS EXAMINED: Overton Wildlife Management Area (UNLV M2485, M2486).

ADDITIONAL RECORDS: formerly Virgin and Muddy rivers*, Searchlight Ferry, 10 miles below Hoover Dam (Hall 1946), Lake Mohave, below Davis Dam (Deming 1953); Pierce Ferry (Hall 1946).

OBSERVATIONS: Colorado River at mile 252, Spencer Canyon on Colorado River (Schwartz); two coves south of Nine Mile Cove on Lake Mohave, 1 mile south of Willow Beach (LMNRA).

CRICETIDAE

Reithrodontomys megalotis (western harvest mouse)

Locally common especially in the Las Vegas Wash system and occasionally in other areas including desert scrub.

SPECIMENS EXAMINED: Las Vegas Wash (UNLV M337, M390, M1091-1097, M1708, M1715, M2599, M2600).

ADDITIONAL RECORDS: St. Thomas, Colorado River, 14 miles east of Searchlight (Hall 1946); Las Vegas Wash (Bradley and Niles 1973); Waring Ranch - northwest of Mt. Dellenbaugh*; Oak Grove - northwest of Mt. Dellenbaugh*; Green Springs, Sullivan Ranch at 3 miles north of Mt. Emma*; Dry Lake (Toroweap Lake)*; 1/2 mile east of Vulcans Throne* (Hoffmeister and Durham 1971).

OBSERVATIONS: Overton Wildlife Management Area, Las Vegas Wash at Lake Mead (Austin).

Peromyscus crinitus (canyon mouse)

The canyon mouse is relatively common in most of LMNRA except at the highest elevations. It is found in a variety of habitats but reaches its greatest abundance in rocky canyons.

SPECIMENS EXAMINED: Falls Springs in Cedar Basin (UNLV M953-955); Valley of Fire Road* (UNLV M3453); Rogers Spring (LMNRA #467, #469, #538); Las Vegas Wash* (UNLV M2711); 1/8 mile south of Railroad Pass* (UNLV M2428); Pakoon Springs, 15 miles north of Colorado River (UNLV M2379, M2391, M2392); rim above Quartermaster Canyon (LMNRA #421).

ADDITIONAL RECORDS: Valley of Fire*, Boulder City*, Overton*, 2 1/2 miles north of Hoover Dam Ferry (Hall 1946); Hoover Dam Ferry (Cockrum 1960); base of Grand Wash Ledge, 4 miles south of Pakoon Springs*, Grapevine Springs*, Seven Springs, Tasi Springs, Lake Mead at foot of Grand Wash, Toroweap Lake*, Toroweap Point*, south end of Toroweap Valley*, 1/2 mile northeast of Vulcans Throne* (Hoffmeister and Durham 1971); Stantons Cave, Colorado River at Mile 188 (MNA, 1974).

OBSERVATIONS: North Shore Road at 3 miles south of Echo Bay, Eldorado Canyon, Christmas Tree Pass, Grapevine Canyon, 3 miles south of Temple Bar, Willow Beach Road (Austin); 2 miles west of Nelson, Black Canyon Wash, Southern Nevada Water Project Pump #2, Corrall Spring, Echo Bay, Mt. Dellenbaugh, Boulder Beach, St. Thomas Wash, Callville Bay, Blue Point Spring, Fire Mountain, Rogers Spring, 15 miles ENE of Callville Bay on North Shore Road (Schwartz); Christmas Tree Pass (Austin, Schwartz); Granite Wash (O'Farrell).

Peromyscus eremicus (cactus mouse)

This species is the most abundant deer mouse in LMNRA. It occurs in nearly all habitats except at the highest elevations.

SPECIMENS EXAMINED: Falls Springs, Cedar Basin (UNLV M952); Kaolin Reservoir (LMNRA #433, #434, #506, #507); Las Vegas Wash* (UNLV M1242, M1709); 10 miles south of

Railroad Pass, 1.5 miles east of U. S. 95 (UNLV M3463); 10.2 miles south of Nevada 77 along Colorado River (UNLV M112); Twin Canyon (LMNRA #438, #511); Emory (Columbine) Falls (LMNRA #436, #509, #510); Katherine Wash (LMNRA #454, #523).

ADDITIONAL RECORDS: Muddy Creek* (Burt 1934); 1.2 miles east of St. Thomas, Muddy River*, Colorado River at 14 miles east of Searchlight (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Emory Falls, Twin Canyon, Pierce Ferry, 8 miles south of Pierce Ferry (Baldwin 1944); old Searchlight Ferry, Grand Wash at 8 miles south of Pakoon Springs*, Colorado River at mouth of Diamond Creek, Pierce Ferry, 4 miles southwest of Pierce Ferry, Rampart Cave on Colorado River, Gold Basin, 20 miles south of Greggs Ferry (Cockrum 1960); base of Grand Wash Ledge, Black Willow Springs*, Grapevine Springs*, Grand Wash, Seven Springs, Tasi Springs, Lake Mead at foot of Grand Wash, Dry (Toroweap) Lake*, south end of Toroweap Valley*, 1/2 mile east of Vulcans Throne* (Hoffmeister and Durham 1971); Diamond Creek, Whitmore Wash (MNA 1974).

OBSERVATIONS: Overton Wildlife Management Area, North Shore Road, Callville Bay, Las Vegas Wash at Lake Mead, Boulder Beach Campground, Railroad Pass*, Eldorado Canyon, Cottonwood Cove, Grapevine Canyon, 3 miles west of Davis Dam, Kingman Wash, Detrital Wash, Temple Bar, Pierce Ferry, between Temple Bar and Pierce Ferry, Willow Beach, Katherine (Austin); 4 miles east of Bullhead City*, Granite Wash (O'Farrell); St. Thomas Wash, Bluepoint Spring, Corrall Spring, Tyro Wash, Southern Nevada Water Project Pump #2, Boulder Beach, base of Spirit Mountain, Fire Mountain (Schwartz); Echo Bay, Rogers Spring, Christmas Tree Pass (Austin, Schwartz).

Peromyscus maniculatus (deer mouse)

The deer mouse is most abundant at the higher elevations in the pinyon-juniper and ponderosa pine zones. It is occasionally found at low elevations, especially near water, but also away from water in the low desert. It is thus the most widespread *Peromyscus* in LMNRA.

SPECIMENS EXAMINED: Sunrise Mountain* (UNLV M1438); Shivwits Plateau (UNLV).

ADDITIONAL RECORDS: St. Thomas, Cedar Basin* (Burt 1934); Colorado River at 14 miles east of Searchlight, opposite Fort Mohave* (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Fort Mohave*, Colorado River, 10 miles north of Red Lake (Cockrum 1960); Shivwits Plateau, Waring Ranch on Shivwits Plateau*, Green Spring, Sullivan Ranch at 3 miles north of Mt. Emma*, Toroweap Point*, Dry (Toroweap) Lake*, 1/2 mile south of Dry Lake*, 1 mile north of Vulcans Throne* (Hoffmeister and Durham 1971).

OBSERVATIONS: Las Vegas Wash*, Shivwits Plateau (Austin) Mt. Dellenbaugh (Schwartz).

Peromyscus boylii (brush mouse)

The brush mouse is rare at lower elevations but becomes more common at the higher elevations, especially in rocky areas with heavy brush.

SPECIMENS EXAMINED: Cedar Basin (UNLV M948, M956-958); Pakoon Springs Ranch* (UNLV M2397).

ADDITIONAL RECORDS: Colorado River at 14 miles east of Searchlight (Hall 1946); Waring Ranch on Shivwits Plateau*, Oak Grove*, northwest of Mt. Dellenbaugh, Green Spring, Sullivan Ranch, 3 miles north of Mt. Emma*, Mt. Dellenbaugh (Hoffmeister and Durham 1971); Stantons Cave (MNA, 1974).

OBSERVATIONS: None.

Peromyscus truei (pinon mouse)

This large-eared mouse is uncommon and locally distributed within LMNRA. It is found almost exclusively in pinon-juniper woodland, hence it's name.

SPECIMENS EXAMINED: Cedar Basin (UNLV M951-954, M965, M1237).

ADDITIONAL RECORDS: Toroweap Valley*, Diamond Creek (Cockrum 1960); Waring Ranch House, Parashaunt Wash, Shivwits Plateau*, Oak Grove*, northwest of Mt. Dellenbaugh, Green Springs, Toroweap Point*, 1/2 mile northeast of Vulcans Throne* (Hoffmeister and Durham 1971).

OBSERVATIONS: Mt. Dellenbaugh (Schwartz).

Onychomys leucogaster (northern grasshopper mouse)

This species has not been reported within LMNRA but there are records for adjacent areas. It is to be expected in the northern portion of the recreation area.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Dry (Toroweap) Lake*, 1/2 mile south of Dry Lake* (Hoffmeister and Durham 1971).

OBSERVATIONS: None.

Onychomys torridus (southern grasshopper mouse)

This principally carnivorous mouse is widespread but not common throughout the lower elevations of LMNRA.

SPECIMENS EXAMINED: 4 miles south of Railroad Pass* (UNLV M41).

ADDITIONAL RECORDS: St. Thomas, Cedar Basin*, 14 miles east of Searchlight at Jap Ranch, southwest of Searchlight, Bonelli's Ferry (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Pierce Ferry (Baldwin 1944); Gold Basin*, Grand Wash at 8 miles south of Pakoon Springs* (Hall and Kelson 1959); Colorado River, Pierce Ferry, 8 miles south of Pierce Ferry, Fort Mohave* (Cockrum 1960); Grapevine Spring*, 1/2 mile east of Vulcans Throne* (Hoffmeister and Durham 1971).

OBSERVATIONS: Rogers Spring, North Shore Road at Callville Bay Road, Grapevine Canyon (Austin); Granite Wash (O'Farrell).

Sigmodon hispidus (hispid cotton rat)

A colony of this species was reported along the Nevada side of the Colorado River near the recreation area. Recent attempts to relocate this colony after 1965 have failed (Bradley 1966).

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Colorado River, 1/2 mile north of the California-Nevada monument* (Hall 1946, Bradley 1966).

OBSERVATIONS: None.

Neotoma albigula (white-throated woodrat)

This species occurs uncommonly only on the Arizona side of the Colorado River where it may be found in the same areas with the following species.

SPECIMENS EXAMINED: 15 miles from Hoover Dam on U. S. 93 (LMNRA #418, #494); Black Mountains above Katherine Wash (LMNRA #458, #527).

ADDITIONAL RECORDS: Colorado River opposite Searchlight (Hall 1946); Fort Mohave* (Hall and Kelson 1959); Colorado River, Gold Basin, 20 miles south of Greggs Ferry (Cockrum 1960).

OBSERVATIONS: 4 miles east of Bullhead City* (O'Farrell).

Neotoma lepida (desert wood rat)

Widespread throughout LMNRA at all elevations, the desert wood rat may be locally abundant especially in areas where there are large stands of cholla cacti. It also frequents rocky ledges where it builds it's nest among boulders or in cracks.

SPECIMENS EXAMINED: Cedar Basin (UNLV M946, M947, M1245); Hemenway Wash (LMNRA #408, #484); island near Hemenway Wash (LMNRA #415, #491); Boulder City (LMNRA #439, #512); Pakoon Springs Ranch (UNLV M2398, M2399).

ADDITIONAL RECORDS: Muddy River*, Lost City*, St. Thomas, Cedar Basin*, 2 1/2 miles north of Hoover Dam Ferry, Boulder City*, Colorado River at 14 miles east of Searchlight (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); near Rampart Cave, south of Pierce Ferry (Baldwin 1944); Hoover Dam Ferry, Colorado River (Hall and Kelson 1959); Colorado River at mouth of Diamond Creek, Fort Mohave*. Grand Wash at 8 miles south of Pakoon Springs* (Cockrum 1960); Black Willow Springs*, Seven Springs, Tasi Springs, Lake Mead at foot of Grand Wash, Waring Ranch, Shivwits Plateau*, Green Springs, Toroweap Point*, 1/2 mile east of Vulcans Throne* (Hoffmeister and Durham 1971); Stantons Cave, Whitmore Wash (MNA, 1974).

OBSERVATIONS: North Shore Road at 3 miles south of Las Vegas Wash*, Railroad Pass*, Cottonwood Cove, Grapevine Canyon, Shivwits Plateau road between Temple Bar and Pierce Ferry, Pierce Ferry Road, Detrital Wash, Kingman Wash, Willow Beach, Katherine (Austin); 4 miles east of Bullhead City*, Granite Wash (O'Farrell); St. Thomas Wash, Blue Point Spring, Rogers Spring, Corrall Spring, 15 miles ENE of Callville Bay on North Shore Road, Tyro Wash, Southern Nevada Water Project Pump #2, Las Vegas Bay, Black Canyon Wash, Spirit Mountain, Fire Mountain (Schwartz); Echo Bay, Callville Bay, Eldorado Canyon, Christmas Tree Pass (Austin, Schwartz).

Ondatra zibethicus (muskrat)

Rare along the Colorado River, in Las Vegas Wash and at Rogers Spring. The small population at Rogers Spring is no longer present due to modification of the spring area.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Muddy Creek near St. Thomas (Burt 1934); Durban Ranch at 14 miles east of Searchlight on Colorado River (Hall 1946); lower Colorado River (Deming 1953);

Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: Rogers Spring (Douglas, Reigle, Schwartz).

MURIDAE

Mus musculus (house mouse)

Locally common around towns and in the Las Vegas Wash system, the house mouse is not found away from these areas.

SPECIMENS EXAMINED: Boulder City* (LMNRA #422, #428); Las Vegas Wash* (UNLV M1099-1102, M1710, M2537).

ADDITIONAL RECORDS: Boulder City*, LMNRA, Colorado River (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: Las Vegas Wash at Lake Mead (Austin).

ERETHIZONTIDAE

Erethizon dorsatum (porcupine)

The porcupine is expected rarely at the higher elevations of the Shivwits Plateau within LMNRA. There are two records for along the Colorado River.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Colorado River below Hoover Dam (Deming 1953); Mt. Dellenbaugh, Shivwits Plateau (Hoffmeister and Durham 1971).

OBSERVATIONS: Nine Mile Cove (LMNRA).

CANIDAE

Canis latrans (coyote)

The coyote is widespread and not uncommon throughout LMNRA. It is to be expected in nearly any habitat.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Cedar Basin*, Colorado River at 14 miles east of Searchlight, Overton* (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Mt. Dellenbaugh, Waring Ranch on Shivwits Plateau*, Toroweap Lake*, Toroweap Point* (Hoffmeister and Durham 1971).

OBSERVATIONS: Hualapai Point, Columbine Falls, Greggs Hideout, Monkey Cove, Grand Wash, Temple Bar, Detrital Wash, Willow Beach, Boulder Beach sewage ponds (LMNRA); Rogers Spring, Eldorado Canyon, Grapevine Canyon, Shivwits Plateau, road between Temple Bar and Pierce Ferry (Austin); St. Thomas Wash, Bluepoint Spring, Echo Bay, Corrall Spring, 15 miles ENE of Callville Bay on North Shore Road, Callville Bay, Las Vegas Bay, Southern Nevada Water Project Pump #2, Whitmore Point, Mt. Dellenbaugh (Schwartz), Christmas Tree Pass (Austin, Schwartz).

Canis lepus (gray wolf)

Accidental, a single old record exists for LMNRA. It is not likely to be recorded again.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Virgin Basin (Baldwin 1944).

OBSERVATIONS: None.

Vulpes macrotis (kit fox)

This small fox is occasional throughout the lower elevations of LMNRA.

SPECIMENS EXAMINED: Boulder City* (LMNRA #460, #530).

ADDITIONAL RECORDS: Boulder City*, Boulder Beach, Las Vegas Wash* (Baldwin 1944); Durban Ranch on Colorado River at 14 miles east of Searchlight, southeast of Searchlight (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Fort Mohave* (Hall and Kelson 1959); Grand Wash (Hoffmeister and Durham 1971).

OBSERVATIONS: 1/4 mile east of Cottonwood Cove Ranger Station, Temple Bar campground, Temple Bar, 1 mile east of Detrital Wash on Temple Bar Road, 8 miles south of Hoover Dam on U. S. 93 (LMNRA); 4 miles north of Callville Bay turnoff on North Shore Road, 5 miles west of Davis Dam (Austin); Christmas Tree Pass (Hogan, Schwartz).

Urocyon cinereoargenteus (gray fox)

The gray fox is occasional throughout LMNRA. At lower elevations, it prefers washes and areas near the lakes.

SPECIMENS EXAMINED: Boulder City* (LMNRA #448); 10 miles south of Hoover Dam on U. S. 93 (LMNRA #3637).

ADDITIONAL RECORDS: Boulder City* (Baldwin 1944); Cedar Basin*, 14 miles east of Searchlight on Colorado River (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Waring Ranch on Shivwits Plateau* (Hoffmeister and Durham 1971).

OBSERVATIONS: Corrall Spring, 12.5 miles southeast of Hoover Dam on U. S. 93, Mt. Dellenbaugh (Schwartz); Willow Beach (Austin).

PROCYONIDAE

Bassariscus astutus (ringtail)

This handsome animal is rare within LMNRA and is nearly exclusively restricted to areas along the Colorado River. The best location to observe it is at Hoover Dam where it is seen occasionally.

SPECIMENS EXAMINED: Boulder City* (UNLV M1324).

ADDITIONAL RECORDS: along Colorado River (Burt 1934); Boulder City* (Baldwin 1944); Eldorado Canyon (Hall 1946); Hoover Dam, Overton* (Deming 1953); Boulder City* (Bradley and Hansen 1965); mouth of Diamond Creek (Hall and Kelson 1959); along Colorado River, Grand Wash (Hoffmeister and Durham 1971).

OBSERVATIONS: Hoover Dam, Grapevine Canyon (Austin); Christmas Tree Pass (Schwartz).

Procyon lotor (raccoon)

The distribution of the raccoon, within LMNRA, like the ringtail, is closely tied to the Colorado River Drainage. This species appears to be less common than the latter based on the number of records.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Quartermaster Canyon, Twin Canyon, Spencer Canyon, Overton area along Muddy River* (Baldwin 1944); Colorado River drainage (Deming 1953); Las Vegas Wash* (Bradley and Niles 1973).

OBSERVATIONS: Spencer Canyon (Schwartz, Stevens).

MUSTELIDAE

Taxidea taxus (badger)

The badger is occasional throughout LMNRA in nearly all habitats except areas which are very rocky or those with clay soils, especially on dry lakes.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Black Canyon (Baldwin 1944); Boulder City*, Colorado River at 14 miles east of Searchlight (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Shivwits Plateau, Toroweap Valley* (Hoffmeister and Durham 1971).

OBSERVATIONS: Christmas Tree Pass (Hogan, Schwartz); North Shore Road at 3 miles north of Callville Bay, 5 miles west of Davis Dam, Willow Beach Road (Austin).

Spilogale gracilis (western spotted skunk)

The spotted skunk is occasional, especially in the vicinity of water but is often found many miles from free water. It occurs at all elevations within LMNRA.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: St. Thomas (Burt 1934); Overton* (Baldwin 1944); 1 1/2 mile northwest of Boulder City* (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Pakoon Springs, Tasi Springs, Waring Ranch on Shivwits Plateau*, along Colorado River (Hoffmeister and Durham 1971).

OBSERVATIONS: None.

Mephitis mephitis (striped skunk)

This skunk is more closely tied to water than is the spotted skunk. Within LMNRA it is most common along the Colorado River but has also been recorded on the Shivwits Plateau.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: along Muddy Creek and Virgin River* (Burt 1934); Muddy and Virgin valleys near Overton* (Baldwin 1944); along Colorado River at Jap Ranch and Durban Ranch - both 14 miles east of Searchlight (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Fort Mohave* (Cockrum 1960); south of Mt. Dellenbaugh, Shivwits Plateau (Hoffmeister and Durham 1971).

OBSERVATIONS: None.

Lontra canadensis (river otter)

Formerly occurred along the Colorado River and it's tributaries. We know of one possible record in January 1975 in Cottonwood Basin.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Colorado River at Virgin River, Boulder Canyon, mouth of Eldorado Wash (Hall 1946); Iceberg Canyon (Deming 1953); Willow Beach (Baldwin 1944).

OBSERVATIONS: Cottonwood Basin (LMNRA).

FELIDAE

Felis concolor (mountain lion)

This large cat can be expected as regular but rare within LMNRA only at the higher elevations of the Shivwits Plateau. Lowland records undoubtedly represent strays from other areas.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Boulder Beach Ranger Station, south of Las Vegas Wash* (Baldwin 1944); Waring Ranch, Shivwits Plateau* (Hoffmeister and Durham 1971).

OBSERVATIONS: Hualapai Indian Lands on LMNRA, Willow Beach access road, Cottonwood Basin on Arizona side (LMNRA).

Lynx rufus (bobcat)

The bobcat is rare within LMNRA but is reported along the Colorado River and on the Shivwits Plateau.

SPECIMENS EXAMINED: Searchlight* (LMNRA #459, #529).

ADDITIONAL RECORDS: Boulder City*, Valley of Fire*, Black Canyon (Baldwin 1944); Cedar Basin*, Colorado River at 14 miles east of Searchlight (Hall 1946); Las Vegas Wash* (Bradley and Niles 1973); Grand Wash, Waring Ranch, 9 miles north and 1 mile west of Mt. Dellenbaugh* (Hoffmeister and Durham 1971).

OBSERVATIONS: near mouth of Virgin Canyon, junction of Pierce Ferry and Quartermaster View roads, Hualapai Wash, 2 miles north of Mica Mine, Temple Bar (LMNRA); Las Vegas Bay, Christmas Tree Pass (Schwartz).

EQUIDAE

Equus asinus (feral burro)

Small herds of this species can be observed in the lower portions of LMNRA, especially adjacent to the lakes and river.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Boulder Canyon; along Lake Mohave (Baldwin 1944); Gold Butte* (Deming 1953); River Mountains (Denniston 1965).

OBSERVATIONS: Blue Point Spring, Rogers Spring, Corrall Spring, Echo Bay, Tyro Wash (Schwartz); Big Burro Bay, north of the Temple on Nevada Shore, Walker Wash, Burro Wash, Echo Bay, North Shore Road at Echo Bay Road, 1/4 mile west of Napoleons Tomb, Temple Mesa, 1/2 mile west of Detrital Bay, Delmar Bay, Haystack Bay, east side of Virgin Basin by Walker Wash, Lakeside Mine water access road, Mile 38.5-39 on north shore, Willow Beach access road, Nevada shore of Lake Mohave at Mile 16.3, Lonesome Wash at Mile 22 of Lake Mohave, Lake Mohave at Miles 22-26 on Arizona shore, Lake Mohave at Mile 25 (LMNRA).

CERVIDAE

Odocoileus hemionus (mule deer)

The deer is rare at lower elevations with most records near the Colorado River and is probably more common at the higher elevations on the Shivwits Plateau.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Gold Butte* (Baldwin 1944); Bonelli Peak (Hall 1946); Black Canyon, Eldorado Canyon, Colorado River below Hoover Dam, Colorado River below Searchlight, Lake Mohave (Deming 1953); Mt. Dellenbaugh (Hoffmeister and Durham 1971).

OBSERVATIONS: 5 3/4 miles north of Eldorado Canyon on Nevada side, Green Springs (LMNRA); Mt. Dellenbaugh (Austin, Schwartz).

ANTILOCAPRIDAE

Antilocapra americana (pronghorn)

Hypothetical; it is possible that this species occurred in the Gold Butte area within historic times.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: possibly Gold Butte* (Deming 1953).

OBSERVATIONS: None.

BOVIDAE

Ovis canadensis (mountain sheep)

The bighorn occurs largely along the entire expanse of Lakes Mead and Mohave except apparently on the Nevada shore above Callville Bay. It is most common on both sides of the river below Hoover Dam.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: Black Canyon below Boulder Dam, Boulder Canyon, Iceberg Canyon (Baldwin 1944); 4 miles east of Boulder City*, opposite Willow Beach, 9 miles south of Hoover Dam, 14 miles east of Searchlight, Cottonwood Cove Road, Bonelli Peak (Hall 1946); along Colorado River (Deming 1953); many locations on Nevada side of Colorado River, Arizona side of Hoover Dam, Willow Beach (Sleznick 1963); Valley of Fire*, Newberry Mountains, Black Mountain, Spirit Mountain, Eldorado Range, just south of Boulder City*, Gold Butte* (Barrett 1965); River Mountains, LMNRA (Denniston 1965); Toroweap*, then along Colorado River to California (Hall and Kelson 1959); Grand Wash Cliffs (Hoffmeister and Durham 1971).

OBSERVATIONS: North Shore Road at Mile 14.1, River Mountains, Boulder Beach, Boulder Beach residential area, Hemenway Wash access road, Lake Shore Road near Lake Mead Lodge, 1 mile west of Nelson, north side of Newberry Cove, Upper Grapevine Spring, Little Gyp Beds, Promontory Point, 1/2 mile north on Pipe Spring Canyon Road, Virgin Canyon, Iceberg Ridge, Monkey Hole on Arizona shore, Cathedral Cove, 1/4 mile west of Burro Point on Arizona shore, Copper Mountain, Deep Cove on Nevada shore, Lonesome Wash, Ramshead Cove, Lake Mohave at Mile 16.3 (LMNRA), Nevada side of Hoover Dam (Austin); Southern Nevada Water Project Pump #2 (Schwartz).

Capra sp. (feral goat)

A single male goat was reported in the Burro Bay area during 1963.

SPECIMENS EXAMINED: None.

ADDITIONAL RECORDS: None.

OBSERVATIONS: Cove behind the Temple, Burro Bay (LMNRA).

LITERATURE CITED

Baldwin, G.C. 1944. A check-list of the mammals of the Boulder Dam Recreational Area. Natl. Park Serv. mimeo. Boulder City, Nevada.

Barrett, R.H. 1965. A history of the bighorn in California and Nevada. Desert Bighorn Council Trans., 40-48.

Bentley, W.W. 1957. A check-list of the mammals of the Lake Mead National Recreation Area. (revision of Baldwin 1944). Natl. Park Serv., Boulder City, Nevada. mimeo.

Bradley, W.G. 1966. The status of the cotton rat in Nevada. J. Mammal. 47:349-350.

_____ and C.G. Hansen. 1965. Observations on the distribution of the ring-tailed cat in southern Nevada. Southwest. Natur. 10:310-311.

_____ and K.S. Moor. 1968. Additional records of Notiosorex crawfordi for southern Nevada. Southwest. Natur. 13:104-105.

_____ and W.E. Niles. 1973. Study of the impact on the ecology of Las Vegas Wash under alternative actions in water quality management. Final report to Las Vegas Valley Water District.

Burt, W.H. 1934. The mammals of southern Nevada. Trans. San Diego Soc. Natur. Hist. 7:375-428.

Cockrum, E.L. 1960. The mammals of Arizona, their taxonomy and distribution. Univ. Arizona Press, Tucson.

_____ and B.F. Musgrove. 1964a. Additional records of the Mexican big-eared bat, Plecotus phyllotis (Allen), from Arizona. J. Mammal. 45:472-474.

_____ and _____. 1964b. Cave myotis, Myotis velifer, from southern Nevada. J. Mammal. 45:636-637.

Deming, O.V. 1953. The flora and fauna of Clark County, Nevada. Unpubl. ms.

Denniston, A. 1965. Status of bighorn in the River Mountains of Lake Mead National Recreation Area. Desert Bighorn Council Trans., 27-34.

Hall, E.R. 1946. Mammals of Nevada. Univ. California Press, Berkeley.

_____ and K.R. Kelson. 1959. The mammals of North America. Ronald Press, New York.

Hoffmeister, D.F. and F.E. Durham. 1971. Mammals of the Arizona Strip including Grand Canyon National Monument. Mus. Northern Arizona, Tech. Series No. 11.

_____ and I.A. Nader. 1963. Distributional notes on Arizona mammals. Trans. Illinois Acad. Sci. 56:92-93.

Miller, G.S., Jr. and G.M. Allen. 1928. The American bats of the genera Myotis and Pizonyx. U.S. Nat. Mus. Bull. No. 144.

Museum of Northern Arizona. 1974. History and bibliography of biological research in the Grand Canyon National Park with emphasis on the riparian zone. Unpubl. ms.

O'Farrell, M.J. 1970. Notes on the distribution of Macrotus waterhousii in southern Nevada. Great Basin Natur. 30:53.

Ryser, F.A. 1964. Spiny pocket mouse in Nevada. J. Mammal. 45:301-302.

Sleznick, J. 1963. The bighorn sheep of Lake Mead National Recreation Area. Desert Bighorn Council Trans., 58-60.

INDEX

Ammospermophilus harrisii, 43
Ammospermophilus leucurus, 43
Antilocapra americana, 66
Antilocapridae, 66
Antrozous pallidus, 39
badger, 62
Bassariscus astutus, 61
bat, Allen's big-eared, 38
big brown, 37
big free-tailed, 39
Brazilian free-tailed, 39
California leaf-nosed, 34
western mastiff, 40
hoary, 38
pallid, 39
red, 37
silver-haired, 36
Townsend's big-eared, 38
beaver, 51
bobcat, 64
Bovidae, 66
burro, feral, 64
Canidae, 59
Canis latrans, 59
Canis lupus, 59
Capra sp., 67
Castor canadensis, 51
Castoridae, 51
Cervidae, 65
chipmunk, cliff, 42
least, 42
cottontail, desert, 40
Nuttall's, 40
coyote, 59
Cricetidae, 51
deer, mule, 65
Dipodomys deserti, 50
Dipodomys merriami, 49
Dipodomys microps, 49
Dipodomys ordii, 49
Eptesicus fuscus, 37
Equidae, 64
Equus asinus, 64
Erethizon dorsatum, 58
Erethizontidae, 58
Eumops perotis, 40
Eutamias dorsalis, 42
Eutamias minimus, 42
Felidae, 63
Felis concolor, 63
fox, gray, 60
kit, 60
Geomyidae, 45
goat, feral, 67
gopher, pocket: southern, 45
Heteromyidae, 46
jackrabbit, black-tailed, 41
Lasionycteris noctivagans, 36
Lasiurus borealis, 37
Lasiurus cinereus, 38
Leporidae, 40
Lepus californicus, 41
lion, mountain, 63
Lontra canadensis, 63
Lynx rufus, 64
Macrotus californicus, 34
Mephitis mephitis, 63
Molossidae, 39
mouse, brush, 54
cactus, 52

mouse, canyon, 52
deer, 53
house, 58
pinon, 54
mouse, harvest: western, 51
mouse, grasshopper: northern, 55
southern, 55
mouse, pocket: Arizona, 46
desert, 48
Great Basin, 47
little, 46
long-tailed, 47
rock, 48
spiny, 48
Muridae, 58
Mus musculus, 58
muskrat, 57
Mustelidae, 62
Myotis, Arizona, 35
California, 36
cave, 35
fringed, 35
Yuma, 34
Myotis californicus, 36
Myotis occultus, 35
Myotis thysanodes, 35
Myotis velifer, 35
Myotis yumanensis, 34
Neotoma albigula, 56
Neotoma lepida, 56
Notiosorex crawfordi, 34
Odocoileus hemionus, 65
Ondatra zibethicus, 57
Onychomys leucogaster, 55
Onychomys torridus, 55
otter, river, 63
Ovis canadensis, 66
Perognathus amplus, 46
Perognathus formosus, 47
Perognathus intermedius, 48
Perognathus longimembris, 46
Perognathus parvus, 47
Perognathus penicillatus, 48
Perognathus spinatus, 48
Peromyscus boylii, 54
Peromyscus crinitus, 52
Peromyscus eremicus, 52
Peromyscus maniculatus, 53
Peromyscus truei, 54
Phyllostomatidae, 34
pipistrelle, western, 36
Pipistrellus hesperus, 36
Plecotus phyllotis, 38
Plecotus townsendii, 38
porcupine, 58
Procyon lotor, 61
Procyonidae, 61
pronghorn, 66
raccoon, 61
rat, cotton: hispid, 56
rat, kangaroo: chisel-toothed, 49
desert, 50
Merriam's, 49
Ord's, 49
Reithrodontomys megalotis, 51
ringtail, 61
Sciuridae, 42
sheep, mountain, 66
shrew, desert, 34
Sigmodon hispidus, 56

skunk, striped, 63
western spotted, 62
Soricidae, 34
Spermophilus tereticaudus, 44
Spermophilus variegatus, 44
Spilogale gracilis, 62
squirrel, antelope: Harris', 43
white-tailed, 43
squirrel, ground: round-tailed, 44
squirrel, rock, 44
Sylvilagus audubonii, 40
Sylvilagus nuttallii, 40
Tadarida brasiliensis, 39
Tadarida macrotus, 39
Taxidea taxus, 62
Thomomys umbrinus, 45
Urocyon cinereorgenteus, 60
Vespertilionidae, 34
Vulpes macrotis, 60
wolf, gray, 59
woodrat, desert, 56
white-throated, 56